



2018 ANNUAL REPORT

Building North America's Premier Energy Infrastructure Company



Connecting millions through the power of people, ideas and innovation

OUR VISION

Delivering energy with purpose

OUR MISSION

To be North America's premier energy infrastructure company

OUR VALUES

Do the right thing

We are guided by our ethics, our focus on safety and our willingness to stand for what is right.

Champion people

We invest in people and value diversity and inclusion because it elevates performance and helps us partner responsibly.

Shape the future

We are forward thinkers who innovate and collaborate with stakeholders to make a positive difference.

“Every day, our employees are united by the unique opportunity to make a positive impact on the communities we serve by **delivering energy with purpose.** The strength of our culture, including our employees’ collective focus on our vision, is our differentiator. I could not be more enthusiastic about the growth opportunities ahead of us – we’re all about charting our own path as we aspire to become **North America’s premier energy infrastructure company.**”

Jeffrey W. Martin, Chairman and CEO



The word “purpose” is derived from the Latin “pro,” meaning “forth.” At Sempra, purpose informs our approach to making a positive impact.

Fellow Shareholders:

At Sempra Energy, we are always looking for new and better ways to serve our customers. It drives our employees’ sense of purpose every day. We know that improving the lives of those we serve also helps make our company even more valuable for all our stakeholders. Sempra’s vision reflects this commitment: *delivering energy with purpose.*

NORTH AMERICA’S PREMIER ENERGY INFRASTRUCTURE COMPANY

I am very proud of the progress we made in 2018 to advance our strategic mission to become North America’s premier energy infrastructure company. Through our focus on *People | Priorities | Culture*, we charted an exciting new path to grow stronger, more profitable and more purpose driven.

To support our mission, we made a number of strategic decisions:

- We honed our geographic focus to the most attractive markets in North America, strengthening our leadership positions in three of the top 15 economies in the world: California, Texas and Mexico.
- We narrowed our focus within the energy value chain to electric and natural gas infrastructure where we believe there is an optimal risk/reward profile for our owners.
- Finally, we positioned our business to better serve important markets. By investing in North America’s liquefied natural gas (LNG) infrastructure, we are poised to unlock cleaner and more reliable energy for tens of millions of consumers in Europe, Asia and the Middle East.

This is just the beginning. Today, we are more focused, more disciplined and well-positioned for growth and improved profitability.

PATH TO PREMIER

California

Our California utilities are performing well. They continue to be recognized for excellence in customer service, safety, reliability and clean energy. Last year, San Diego Gas & Electric (SDG&E) won an award for best electric reliability in America, and received the coveted Edison Award for its investments in grid resiliency and the reduction of climate-related vulnerabilities, like wildfires. Southern California Gas Company (SoCalGas) also continues to be a national leader in customer service and is delivering on its promise of operational excellence – modernizing more than 400 miles of the largest gas distribution and transmission network in the U.S. in 2018.

Texas

Last year, we completed the most ambitious transaction in our history, acquiring a majority stake in the largest investor-owned utility in Texas, Oncor Electric Delivery Company LLC (Oncor). This transaction significantly expanded our electric infrastructure business in a growing market – Texas is the second-largest economy in the U.S. We also believe there is a remarkable opportunity for Oncor to continue to invest in critical infrastructure to meet the growing electricity needs of its customers.

Mexico

Our subsidiary, IEnova – one of the largest private energy companies in Mexico – has a strong set of investment opportunities. IEnova continues to make significant progress in the midstream and refined fuels markets to help Mexico diversify its energy supply.

LNG

We also have made significant progress in becoming a leader in LNG export infrastructure in North America. We began the commissioning process on our Cameron LNG joint-venture project in Louisiana and expect to ship the first LNG cargos in mid-2019. In addition to Cameron LNG, we are executing on four other development projects with a goal of building up to 45 million tonnes per annum of LNG export capacity to serve global markets – this is more than the average daily consumption of California, the fifth-largest economy in the world. These projects aim to improve the energy security and carbon footprint of our allies, while supporting U.S. producers of natural gas.

Portfolio Optimization

We also executed several strategic asset sales to focus our investment strategy on the most attractive markets in North America and strengthen our balance sheet. The sales of our U.S. non-utility solar, wind and natural gas storage assets are expected to generate approximately \$2.5 billion in proceeds. In early 2019, we also announced our decision to sell our South American businesses, including Luz del Sur S.A.A. in Peru and Chilquinta Energía S.A. in Chile.

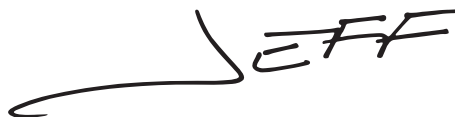
PEOPLE | PRIORITIES | CULTURE

Building a high-performing culture begins and ends with unlocking the full potential of our more than 20,000 diverse and talented employees. That is why on my first day as CEO last spring, I announced my focus on *People | Priorities | Culture*. The goal of this initiative is to reinvest in our employees, lay out a clear vision for the future and align our companies to be even stronger and more focused. To support this initiative, our senior leadership team embarked on a Listening Tour, visiting all four corners of Sempra's family of companies to engage our employees in a conversation about how we can make our company better and more purpose driven.

Our employees' commitment to our shared values is critical. Doing the right thing, championing people and shaping the future represent our core values.

The growth opportunities ahead of us are exciting. So is our ability to make a positive impact. We are charting our own path as we aspire to become North America's premier energy infrastructure company – *delivering energy with purpose*.

Ever forward,



Jeffrey W. Martin
Chairman and Chief Executive Officer

Our path to becoming North America's premier energy infrastructure company starts with excellence in six key areas:

- Public and employee safety
- Reliable delivery of cleaner energy
- Innovation and technology
- Talented and diverse workforce
- Financial excellence
- Energy leadership with purpose



Spotlight: Texas

Powering the Lone Star State

How energy opportunities in Texas are a big part of Sempra Energy's future

137,000
miles of electric
transmission and
distribution lines
in Texas

Sempra Energy's strategic mission is to be North America's premier energy infrastructure company, and there's no place bigger than Texas when it comes to energy.

Texas leads the nation in energy production as the number one producer of oil, natural gas and gasoline. But Texas is more than just an oil and gas state. Texas both produces and consumes more electricity than any other state, and has almost 25,000 megawatts of wind energy capacity.

Last year, Sempra Energy made a bold move through the acquisition of an approximate 80-percent majority interest in Oncor, Texas' largest utility that serves approximately 10 million Texans. Oncor plays a key role in connecting the more than 1,000 new Texans added to the state every day to safe, reliable, affordable power. The Dallas-Ft. Worth Metroplex is one of the fastest-growing metropolitan areas in the country, and booming oil and gas production in the Permian Basin in West Texas will require substantial new electrical infrastructure over the coming decade.

This is creating a big opportunity for Sempra Energy. The company is continuing to grow in Texas through Oncor's planned acquisition of InfraREIT, Inc. – a transmission company that overlaps and is adjacent to Oncor's existing transmission footprint – solidifying Oncor's role in connecting the next generation of renewable energy generation to Texas customers at the lowest rates of any investor-owned utility in Texas.

Whether it's connecting new wind, solar and storage to the Texas grid, or building out infrastructure to serve a booming Texas economy, Sempra Energy's opportunities to continue to grow in Texas are only just beginning.





Spotlight: LNG

45 Mtpa

LNG export goal

Exporting LNG to World Markets

Advancing a goal to become a leader in North America's LNG export market, bringing cleaner and more affordable energy to the world

Across the world, a number of countries are turning to natural gas to reduce the harmful emissions associated with coal.

This is creating a unique energy moment to export LNG, delivering cleaner and more affordable energy, while creating jobs, reducing the trade deficit and improving the energy security of the world.

Sempra Energy, through its subsidiary SoCalGas, has been in the business of serving natural gas customers for more than 150 years and that history – understanding the need to serve customers, seasonality and other market pressures – helps to position Sempra to be a leader in North America's LNG export market.

Sempra Energy's goal is to develop 45 million tonnes per annum of clean LNG export capacity and deliver it to the largest world markets through five strategically located projects in Louisiana, Texas and Mexico, which offer flexibility and scalability to meet current and future global LNG demand. In mid-2019, Cameron LNG is expected to deliver its first cargos, representing a significant milestone for the company.





Spotlight: Community

Committing to Purpose

Sempra Energy employees 'do the right thing' at work and in the community

80,000
hours volunteered
by employees in
our communities

Sempra Energy prides itself on doing the right thing for its stakeholders. The company is committed to environmental responsibility and strong relationships in the communities it serves – guided by ethics, a focus on safety and standing up for what is right.

In 2018, Sempra Energy employees volunteered more than 80,000 hours in the communities where they work and live.

Employees from SoCalGas rose to the opportunity to fight against homelessness, fundraising with the United Way and taking the time to make “Welcome Home” kits for people transitioning out of homelessness.

Oncor, the largest electric utility in Texas, was once again a major participant in the Dallas Heart Walk, in support of the American Heart Association. Team Oncor was the largest Heart Walk team in the nation in 2018, with approximately 4,000 employees, family members and friends!

In Mexico, IEnova is helping its community rebuild after devastating earthquakes in 2017. The company donated food and supplies to victims, and helped rebuild two public elementary schools in the state of Puebla.

Sempra Energy’s commitment to community extends to its focus on safety. This year was one of the safest on-record for all of the Sempra Energy family of companies. SDG&E’s work to protect the communities it serves earned the company Edison Electric Institute’s nationally respected Edison Award, a testament to SDG&E’s efforts with their robust fire-mitigation program which helps to enhance grid resiliency and reduce climate-related vulnerabilities.



About Sempra

Sempra Energy's mission is to be North America's premier energy infrastructure company. With 2018 revenues of more than \$11.6 billion, the San Diego-based company is the utility holding company with the largest U.S. customer base. The Sempra Energy® companies' more than 20,000 employees are focused on delivering energy with purpose to approximately 40 million consumers worldwide. Sempra Energy has been consistently recognized for its leadership in diversity and inclusion, social responsibility and investment value.



Sempra LNG & Midstream

Sempra LNG & Midstream develops, builds and invests in liquefied natural gas facilities and midstream natural gas infrastructure in North America.



Southern California Gas Company

SoCalGas is the largest natural gas distribution utility in the U.S., providing safe, reliable and increasingly renewable natural gas service to approximately 21.9 million consumers.



INova

INova develops, builds and operates energy infrastructure in Mexico, and is one of the largest private energy companies in the country.



San Diego Gas & Electric

SDG&E is an electric and natural gas utility that provides clean, safe and reliable energy to approximately 3.7 million consumers in San Diego and southern Orange Counties.



Oncor Electric Delivery Company LLC*

Oncor, based in Dallas, operates the largest distribution and transmission system in the state, providing safe and reliable service to approximately 10 million Texans.



Sempra South American Utilities**

Chilquinta Energía in Chile and Luz del Sur in Peru invest in electric generation and transmission to provide service to approximately 6.7 million consumers.

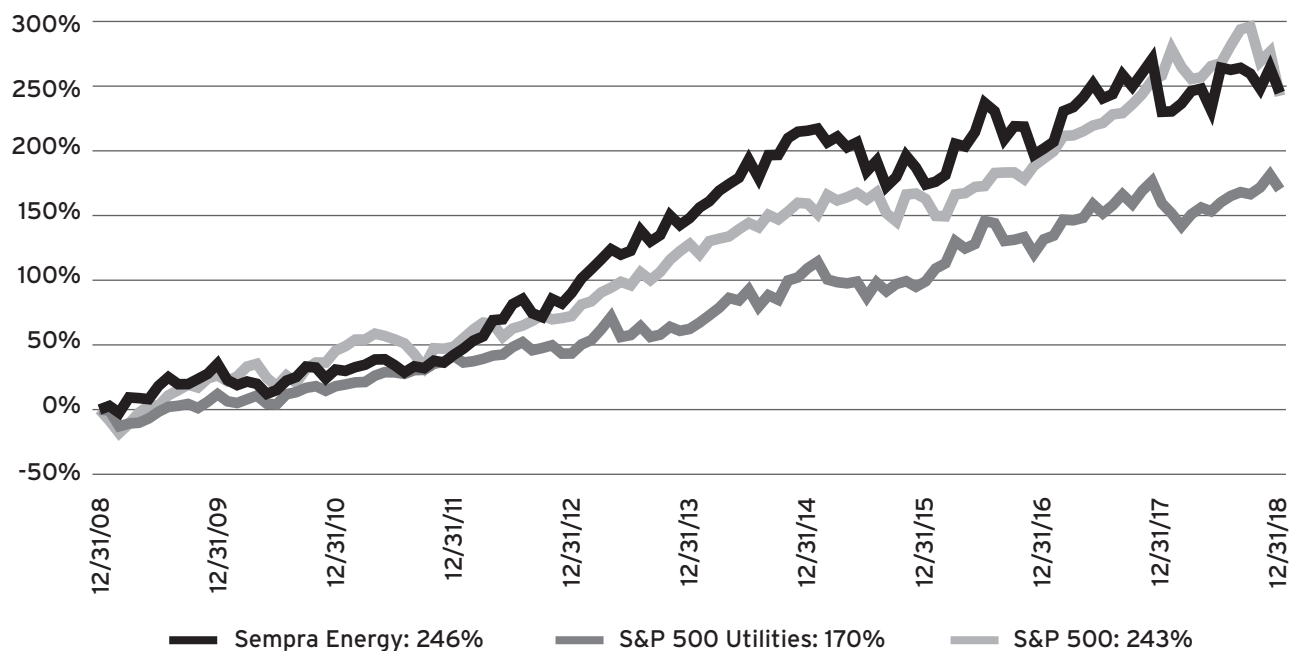
* Sempra Energy indirectly owns approximately 80 percent of Oncor.

** Sempra Energy launched a formal sale process in January 2019 to sell its equity interests in the South American Utilities and expects to complete the sale process by the end of 2019.

Financial Highlights

Comparative Total Returns

Ten years ended 12/31/18



Consolidated Data

Dollars in millions, except per-share amounts

	2016	2017	2018
Revenues	\$ 10,183	\$ 11,207	\$ 11,687
Earnings	\$ 1,370	\$ 256	\$ 924
Adjusted Earnings ¹	\$ 1,267	\$ 1,368	\$ 1,503
Earnings Per Share of Common Stock:			
Basic	\$ 5.48	\$ 1.02	\$ 3.45
Diluted	\$ 5.46	\$ 1.01	\$ 3.42
Adjusted Diluted ¹	\$ 5.05	\$ 5.42	\$ 5.57
Weighted Average Common Shares Outstanding (Diluted, in millions)	251.2	252.3	269.9
Total Assets	\$47,786	\$50,454	\$60,638
Common Dividends Declared Per Share	\$ 3.02	\$ 3.29	\$ 3.58
Debt to Total Capitalization	53%	56%	57%
Book Value Per Common Share	\$ 51.77	\$ 50.40	\$ 54.35

¹ Sempra Energy adjusted earnings and adjusted diluted earnings per common share are non-GAAP financial measures (GAAP represents accounting principles generally accepted in the United States of America). For an explanation and reconciliation of these non-GAAP financial measures to Sempra Energy earnings and diluted earnings per common share, the most directly comparable financial measures calculated in accordance with GAAP, please see "Management's Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations – Adjusted Earnings and Adjusted EPS" in the "Sempra Energy 2018 Form 10-K" included herein.



2018

FORM 10-K

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended

December 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from

to

Commission File No.	Exact Name of Registrants as Specified in their Charters, Address and Telephone Number	State of Incorporation	I.R.S. Employer Identification Nos.
1-14201	SEMPRA ENERGY 488 8th Avenue San Diego, California 92101 (619) 696-2000	California	33-0732627
1-03779	SAN DIEGO GAS & ELECTRIC COMPANY 8326 Century Park Court San Diego, California 92123 (619) 696-2000	California	95-1184800
1-01402	SOUTHERN CALIFORNIA GAS COMPANY 555 West Fifth Street Los Angeles, California 90013 (213) 244-1200	California	95-1240705

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class	Name of Each Exchange on Which Registered
Sempra Energy Common Stock, without par value	NYSE
Sempra Energy 6% Mandatory Convertible Preferred Stock, Series A, \$100 liquidation preference	NYSE
Sempra Energy 6.75% Mandatory Convertible Preferred Stock, Series B, \$100 liquidation preference	NYSE

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

Southern California Gas Company Preferred Stock, \$25 par value
6% Series A, 6% Series

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Sempra Energy	Yes <u> X </u>	No <u> </u>
San Diego Gas & Electric Company	Yes <u> </u>	No <u> X </u>
Southern California Gas Company	Yes <u> </u>	No <u> X </u>

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Sempra Energy	Yes <u> </u>	No <u> X </u>
San Diego Gas & Electric Company	Yes <u> </u>	No <u> X </u>
Southern California Gas Company	Yes <u> </u>	No <u> X </u>

Indicate by check mark whether the registrants (1) have filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) have been subject to such filing requirements for the past 90 days.

Yes X No

Indicate by check mark whether the registrants have submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrants were required to submit such files).

Yes X No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrants' knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Sempra Energy	<u> </u>	<u> X </u>
San Diego Gas & Electric Company	<u> </u>	<u> X </u>
Southern California Gas Company	<u> </u>	<u> X </u>

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

	Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
Sempra Energy	[X]	[]	[]	[]	[]
San Diego Gas & Electric Company	[]	[]	[X]	[]	[]
Southern California Gas Company	[]	[]	[X]	[]	[]

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Sempra Energy	Yes <u> </u>	No <u> </u>
San Diego Gas & Electric Company	Yes <u> </u>	No <u> </u>
Southern California Gas Company	Yes <u> </u>	No <u> </u>

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Sempra Energy	Yes _____	No <u> X </u>
San Diego Gas & Electric Company	Yes _____	No <u> X </u>
Southern California Gas Company	Yes _____	No <u> X </u>

Aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2018:

Sempra Energy	\$31.5 billion (based on the price at which the common equity was last sold as of the last business day of the most recently completed second fiscal quarter)
San Diego Gas & Electric Company	\$0
Southern California Gas Company	\$0

Common Stock outstanding, without par value, as of February 21, 2019:

Sempra Energy	274,039,296 shares
San Diego Gas & Electric Company	Wholly owned by Enova Corporation, which is wholly owned by Sempra Energy
Southern California Gas Company	Wholly owned by Pacific Enterprises, which is wholly owned by Sempra Energy

SAN DIEGO GAS & ELECTRIC COMPANY MEETS THE CONDITIONS OF GENERAL INSTRUCTIONS I(1)(a) AND (b) OF FORM 10-K AND IS THEREFORE FILING THIS REPORT WITH A REDUCED DISCLOSURE FORMAT AS PERMITTED BY GENERAL INSTRUCTION I(2).

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Sempra Energy Proxy Statement to be filed for its May 2019 annual meeting of shareholders are incorporated by reference into Part III of this annual report on Form 10-K.

Portions of the Southern California Gas Company Information Statement to be filed for its May 2019 annual meeting of shareholders are incorporated by reference into Part III of this annual report on Form 10-K.

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SEMPRA ENERGY FORM 10-K
SAN DIEGO GAS & ELECTRIC COMPANY FORM 10-K
SOUTHERN CALIFORNIA GAS COMPANY FORM 10-K
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This combined Form 10-K is separately filed by Sempra Energy, San Diego Gas & Electric Company and Southern California Gas Company. Information contained herein relating to any individual company is filed by such company on its own behalf. Each company makes representations only as to itself and makes no other representation whatsoever as to any other company.

You should read this report in its entirety as it pertains to each respective reporting company. No one section of the report deals with all aspects of the subject matter. Separate Item 6 and 8 sections are provided for each reporting company, except for the Notes to Consolidated Financial Statements in Item 8. The Notes to Consolidated Financial Statements for all of the reporting companies are combined. All Items other than Items 6 and 8 are combined for the reporting companies.

The following terms and abbreviations appearing in the text of this report have the meanings indicated below.

GLOSSARY

2016 GRC FD	final decision in the California Utilities' 2016 General Rate Case
AB	Assembly Bill
AFUDC	allowance for funds used during construction
AOCI	accumulated other comprehensive income (loss)
ARO	asset retirement obligation
ASC	Accounting Standards Codification
Asset Exchange Agreement	agreement and plan of merger among Oncor, SDTS and SU
ASU	Accounting Standards Update
Bay Gas	Bay Gas Storage Company, Ltd.
Bcf	billion cubic feet
Bechtel	Bechtel Corporation
BP	British Petroleum or its subsidiaries
bps	basis points
Cal PA	California Public Advocates Office (formerly known as CPUC Office of Ratepayer Advocates or ORA)
California Utilities	San Diego Gas & Electric Company and Southern California Gas Company, collectively
Cameron LNG JV	Cameron LNG Holdings, LLC
CARB	California Air Resources Board
CCA	Community Choice Aggregation
CCC	California Coastal Commission
CCM	cost of capital adjustment mechanism
CEC	California Energy Commission
CENAGAS	Centro Nacional de Control de Gas
CEQA	California Environmental Quality Act
CFE	Comisión Federal de Electricidad (Federal Electricity Commission in Mexico)
Chevron	Chevron Corporation or its subsidiaries
Chilquinta Energía	Chilquinta Energía S.A. and its subsidiaries
CLF	Chilean Unidad de Fomento
CNE	Comisión Nacional de Energía (National Energy Commission) (Chile)
COFECE	Comisión Federal de Competencia Económica (Mexican Competition Commission)
Con Ed	Consolidated Edison, Inc.
CPI	Consumer Price Index
CPUC	California Public Utilities Commission
CRE	Comisión Reguladora de Energía (Energy Regulatory Commission in Mexico)
CRR	congestion revenue right
CTNG	Compañía Transmisora del Norte Grande S.A.
DA	Direct Access
DEN	Ductos y Energéticos del Norte, S. de R.L. de C.V.
DOE	U.S. Department of Energy
DOGGR	California Department of Conservation's Division of Oil, Gas, and Geothermal Resources
DOT	U.S. Department of Transportation
DPH	Los Angeles County Department of Public Health
Dth	dekatherm
ECA	Energía Costa Azul
Ecogas	Ecogas México, S. de R.L. de C.V.
Edison	Southern California Edison Company, a subsidiary of Edison International
EFH	Energy Future Holdings Corp. (renamed Sempra Texas Holdings Corp.)
EFIH	Energy Future Intermediate Holding Company LLC (renamed Sempra Texas Intermediate Holding Company LLC)
Eletrans	Eletrans S.A., Eletrans II S.A. and Eletrans III S.A., collectively
EMA	energy management agreement
EnergySouth	EnergySouth Inc.
Enova	Enova Corporation
EPA	U.S. Environmental Protection Agency

GLOSSARY (CONTINUED)

EPC	engineering, procurement and construction
EPS	earnings per common share
ERCOT	Electric Reliability Council of Texas, Inc., the independent system operator and the regional coordinator of various electricity systems within Texas
ERR	eligible renewable energy resource
ERRA	Energy Resource Recovery Account
ETR	effective income tax rate
EV	electric vehicle
FERC	Federal Energy Regulatory Commission
FTA	Free Trade Agreement
Gazprom	Gazprom Marketing & Trading Mexico
GCIM	Gas Cost Incentive Mechanism
GdC	Gasoductos de Chihuahua, S. de R.L. de C.V. (now known as IEnova Pipelines)
GHG	greenhouse gas
GRC	General Rate Case
HLBV	hypothetical liquidation at book value
HMRC	United Kingdom's Revenue and Customs Department
IEnova	Infraestructura Energética Nova, S.A.B. de C.V.
IEnova Pipelines	IEnova Pipelines, S. de R.L. de C.V. (formerly known as GdC)
IMG	Infraestructura Marina del Golfo
InfraREIT	InfraREIT, Inc.
InfraREIT Merger Agreement	agreement and plan of merger among Oncor, 1912 Merger Sub LLC (a wholly owned subsidiary of Oncor), Oncor T&D Partners, LP (a wholly owned indirect subsidiary of Oncor), InfraREIT and InfraREIT Partners
InfraREIT Partners	InfraREIT Partners, LP
IOU	investor-owned utility
IRC	U.S. Internal Revenue Code of 1986 (as amended)
IRS	Internal Revenue Service
ISFSI	independent spent fuel storage installation
ISO	Independent System Operator
ITC	investment tax credit
JP Morgan	J.P. Morgan Chase & Co.
JV	joint venture
kV	kilovolt
kW	kilowatt
kWh	kilowatt hour
LA Storage	LA Storage, LLC
LA Superior Court	Los Angeles County Superior Court
Leak	the leak at the SoCalGas Aliso Canyon natural gas storage facility injection-and-withdrawal well, SS25, discovered by SoCalGas on October 23, 2015
LIFO	last in first out
LNG	liquefied natural gas
LPG	liquid petroleum gas
Luz del Sur	Luz del Sur S.A.A. and its subsidiaries
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
Merger	The merger of EFH with an indirect subsidiary of Sempra Energy, with EFH continuing as the surviving company and as an indirect, wholly owned subsidiary of Sempra Energy
Merger Agreement	Agreement and Plan of Merger dated August 21, 2017, as supplemented by a Waiver Agreement dated October 3, 2017 and an amendment dated February 15, 2018, between Sempra Energy, EFH, EFiH and an indirect subsidiary of Sempra Energy
Merger Consideration	Pursuant to the Merger Agreement, Sempra Energy paid consideration of \$9.45 billion in cash
Mexican Stock Exchange	La Bolsa Mexicana de Valores, S.A.B. de C.V., or BMV
MHI	Mitsubishi Heavy Industries, Ltd., Mitsubishi Nuclear Energy Systems, Inc., and Mitsubishi Heavy Industries America, Inc., collectively
Mississippi Hub	Mississippi Hub, LLC
MMBtu	million British thermal units (of natural gas)
MMcf	million cubic feet
Mobile Gas	Mobile Gas Service Corporation
Moody's	Moody's Investors Service

GLOSSARY (CONTINUED)

MOU	Memorandum of Understanding
Mtpa	million tonnes per annum
MW	megawatt
MWh	megawatt hour
NAFTA	North American Free Trade Agreement
NAV	net asset value
NCI	noncontrolling interest(s)
NDT	nuclear decommissioning trusts
NEIL	Nuclear Electric Insurance Limited
NEM	net energy metering
NOL	net operating loss
NRC	Nuclear Regulatory Commission
OCI	other comprehensive income (loss)
OII	Order Instituting Investigation
OIR	Order Instituting a Rulemaking
O&M	operation and maintenance expense
OMEC	Otay Mesa Energy Center
OMEC LLC	Otay Mesa Energy Center LLC
OMI	Oncor Management Investment LLC
Oncor	Oncor Electric Delivery Company LLC
Oncor Holdings	Oncor Electric Delivery Holdings Company LLC
OSINERGMIN	Organismo Supervisor de la Inversión en Energía y Minería (Energy and Mining Investment Supervisory Body) (Peru)
Otay Mesa VIE	OMEC LLC VIE
PBOP	postretirement benefits other than pension
PCIA	Power Charge Indifference Adjustment
PE	Pacific Enterprises
PEMEX	Petróleos Mexicanos (Mexican state-owned oil company)
PG&E	Pacific Gas and Electric Company
PHMSA	Pipeline and Hazardous Materials Safety Administration
PPA	power purchase agreement
PP&E	property, plant and equipment
PRP	Potentially Responsible Party
PSEP	Pipeline Safety Enhancement Plan
PTC	production tax credit
PUCT	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
QF	Qualifying Facility
RAMP	Risk Assessment Mitigation Phase
RBS	The Royal Bank of Scotland plc
RBS SEE	RBS Sempra Energy Europe
RBS Sempra Commodities	RBS Sempra Commodities LLP
REC	renewable energy certificate
REX	Rockies Express pipeline
Rockies Express	Rockies Express Pipeline LLC
ROE	return on equity
ROU	right-of-use
RPS	Renewables Portfolio Standard
RSA	restricted stock award
RSU	restricted stock unit
SB	California Senate Bill
SCAQMD	South Coast Air Quality Management District
SDCA	U.S. District Court for the Southern District of California
SDG&E	San Diego Gas & Electric Company
SDTS	Sharyland Distribution & Transmission Services, L.L.C. (a subsidiary of InfraREIT)

GLOSSARY (CONTINUED)

SEC	U.S. Securities and Exchange Commission
Securities Purchase Agreement	securities purchase agreement among SU, SU Investment Partners, L.P., Sempra Texas Utilities Holdings I, LLC (a wholly owned subsidiary of Sempra Energy) and Sempra Energy
SEDATU	Secretaría de Desarrollo Agrario, Territorial y Urbano (Mexican agency in charge of agriculture, land and urban development)
Sempra Global	holding company for most of Sempra Energy's subsidiaries not subject to California or Texas utility regulation
series A preferred stock	6% mandatory convertible preferred stock, series A
series B preferred stock	6.75% mandatory convertible preferred stock, series B
SFP	secondary financial protection
Shell	Shell México Gas Natural
SoCalGas	Southern California Gas Company
SONGS	San Onofre Nuclear Generating Station
SONGS OII	CPUC's Order Instituting Investigation into the SONGS Outage
S&P	Standard & Poor's
SU	Sharyland Utilities, LP
TAG	TAG Pipelines Norte, S. de R.L. de C.V.
Tangguh PSC	Tangguh PSC Contractors
TCJA	Tax Cuts and Jobs Act of 2017
TdM	Termoeléctrica de Mexicali
Tecnored	Tecnored S.A.
Tecsur	Tecsur S.A.
TO4	Electric Transmission Owner Formula Rate, effective through December 31, 2018
TO5	Electric Transmission Owner Formula Rate, new application
TOU	time-of-use
TransCanada	TransCanada Corporation
TTI	Texas Transmission Investment LLC
TURN	The Utility Reform Network
USMCA	United States-Mexico-Canada Agreement
U.S. GAAP	accounting principles generally accepted in the United States of America
Valero Energy	Valero Energy Corporation
VaR	value at risk
VAT	value-added tax
Ventika	Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V., collectively
VIE	variable interest entity
Willmut Gas	Willmut Gas Company

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

We make statements in this report that are not historical fact and constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on assumptions with respect to the future, involve risks and uncertainties, and are not guarantees of performance. Future results may differ materially from those expressed in the forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the filing date of this report. We assume no obligation to update or revise any forward-looking statement as a result of new information, future events or other factors.

In this report, when we use words such as “believes,” “expects,” “anticipates,” “plans,” “estimates,” “projects,” “forecasts,” “contemplates,” “assumes,” “depends,” “should,” “could,” “would,” “will,” “confident,” “may,” “can,” “potential,” “possible,” “proposed,” “target,” “pursue,” “outlook,” “maintain,” or similar expressions, or when we discuss our guidance, strategy, plans, goals, vision, opportunities, projections, initiatives, objectives or intentions, we are making forward-looking statements.

Factors, among others, that could cause our actual results and future actions to differ materially from those described in any forward-looking statements include risks and uncertainties relating to:

- the greater degree and prevalence of wildfires in California in recent years and the risk that we may be found liable for damages regardless of fault, such as where inverse condemnation applies, and risk that we may not be able to recover any such costs in rates from customers in California;
- actions and the timing of actions, including decisions, new regulations and issuances of authorizations by the CPUC, DOE, DOGGR, DPH, EPA, FERC, PHMSA, PUCT, states, cities and counties, and other regulatory and governmental bodies in the U.S. and other countries in which we operate;
- actions by credit rating agencies to downgrade our credit ratings or those of our subsidiaries or to place those ratings on negative outlook and our ability to borrow at favorable interest rates;
- the success of business development efforts, construction projects, major acquisitions, divestitures and internal structural changes, including risks in (i) obtaining or maintaining authorizations; (ii) completing construction projects on schedule and budget; (iii) obtaining the consent of partners; (iv) counterparties’ ability to fulfill contractual commitments; (v) winning competitively bid infrastructure projects; (vi) disruption caused by the announcement of contemplated acquisitions and/or divestitures or internal structural changes; (vii) the ability to complete contemplated acquisitions and/or divestitures; and (viii) the ability to realize anticipated benefits from any of these efforts once completed;
- the resolution of civil and criminal litigation and regulatory investigations and proceedings;
- deviations from regulatory precedent or practice that result in a reallocation of benefits or burdens among shareholders and ratepayers; denial of approvals of proposed settlements; delays in, or denial of, regulatory agency authorizations to recover costs in rates from customers or regulatory agency approval for projects required to enhance safety and reliability; and moves to reduce or eliminate reliance on natural gas;
- the availability of electric power and natural gas and natural gas storage capacity, including disruptions caused by failures in the transmission grid, limitations on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures;
- risks posed by actions of third parties who control the operations of our investments;
- weather conditions, natural disasters, accidents, equipment failures, computer system outages, explosions, terrorist attacks and other events that disrupt our operations, damage our facilities and systems, cause the release of harmful materials, cause fires and subject us to third-party liability for property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), may be disputed by insurers or may otherwise not be recoverable through regulatory mechanisms or may impact our ability to obtain satisfactory levels of affordable insurance;
- cybersecurity threats to the energy grid, storage and pipeline infrastructure, the information and systems used to operate our businesses and the confidentiality of our proprietary information and the personal information of our customers and employees;
- actions of activist shareholders, which could impact the market price of our securities and disrupt our operations as a result of, among other things, requiring significant time by management and our board of directors;
- changes in capital markets, energy markets and economic conditions, including the availability of credit; and volatility in currency exchange, interest and inflation rates and commodity prices and our ability to effectively hedge the risk of such volatility;
- the impact of recent federal tax reform and our ability to mitigate adverse impacts;
- changes in foreign and domestic trade policies and laws, including border tariffs and revisions to or replacement of international trade agreements, such as NAFTA, that may increase our costs or impair our ability to resolve trade disputes;

- expropriation of assets by foreign governments and title and other property disputes;
- the impact at SDG&E on competitive customer rates and reliability of electric transmission and distribution systems due to the growth in distributed and local power generation and from possible departing retail load resulting from customers transferring to DA and CCA or other forms of distributed and local power generation and the potential risk of nonrecovery for stranded assets and contractual obligations;
- Oncor's ability to eliminate or reduce its quarterly dividends due to regulatory capital requirements and other regulatory and governance commitments, including the determination by a majority of Oncor's independent directors or a minority member director to retain such amounts to meet future requirements; and
- other uncertainties, some of which may be difficult to predict and are beyond our control.

We caution you not to rely unduly on any forward-looking statements. You should review and consider carefully the risks, uncertainties and other factors that affect our business as described herein and in other reports that we file with the SEC.

PART I.

ITEM 1. BUSINESS

This report on Form 10-K includes information for the following separate registrants:

- Sempra Energy and its consolidated entities
- SDG&E and its consolidated VIE
- SoCalGas

References in this report to “we,” “our,” “us,” “our company” and “Sempra Energy Consolidated” are to Sempra Energy and its consolidated entities, collectively, unless otherwise indicated by the context. We refer to SDG&E and SoCalGas collectively as the California Utilities, which do not include our Sempra Texas Utility investment, South American utilities or the utility in our Sempra Mexico segment.

OVERVIEW

We are a Fortune 500 energy-services holding company. Through our businesses, which consist of seven separately managed reportable segments, we invest in, develop and operate energy infrastructure, and provide electric and gas services to customers in North and South America. We were formed in 1998 through a business combination of Enova and PE, the holding companies of our regulated public utilities in California: SDG&E, which began operations in 1881, and SoCalGas, which began operations in 1867. Since our formation in 1998, we have expanded our investment in regulated utility operations through acquisitions in North and South America. However, in January 2019, our board of directors approved a plan to sell our South American businesses based on our strategic shift to be geographically focused on North America. In March 2018, we acquired an indirect ownership interest in Oncor, a regulated electric transmission and distribution business that operates the largest transmission and distribution system in Texas. In 1995, we entered the energy infrastructure business in Mexico through what is now known as IEnova, the first energy infrastructure company to be listed on the Mexican Stock Exchange. IEnova has a diverse portfolio of projects and assets serving Mexico’s growing energy needs. Our energy infrastructure footprint continues to expand across North America, through LNG projects and assets in Louisiana, Texas and Mexico.

Business Strategy

Our mission is to increase shareholder value by becoming North America’s premier energy infrastructure company. We are focused on generating stable, predictable earnings and cash flows by investing in, developing and operating electric and gas infrastructure with the goal of delivering safe and reliable energy to our customers.

OUR SEGMENTS

We provide financial information about our reportable segments in Note 17 of the Notes to Consolidated Financial Statements.

No single customer accounted for 10 percent or more of Sempra Energy’s consolidated revenues in 2018, 2017 or 2016.

SDG&E

SDG&E is a regulated public utility that provides electric services to a population of approximately 3.7 million and natural gas services to approximately 3.4 million of that population, covering a 4,100 square mile service territory in Southern California that encompasses San Diego County and an adjacent portion of southern Orange County.

Electric Utility Operations

Customers and Demand. SDG&E provides electric services through the generation, transmission and distribution of electricity to the following customer classes:

SDG&E – ELECTRIC CUSTOMER METERS AND VOLUMES				
	Customer meter count	Volumes ⁽¹⁾ (millions of kWh)		
	December 31,	Years ended December 31,		
	2018	2018	2017	2016
Residential	1,293,600	6,336	6,577	6,685
Commercial	150,300	6,539	6,763	6,700
Industrial	400	2,169	2,198	2,189
Street and highway lighting	2,100	81	79	75
	1,446,400	15,125	15,617	15,649
CCA and DA	12,500	3,628	3,394	3,515
Total	1,458,900	18,753	19,011	19,164

⁽¹⁾ Includes intercompany sales.

No single customer accounted for 10 percent or more of SDG&E's revenues from electricity sold in 2018, 2017 or 2016.

San Diego's mild climate and SDG&E's robust energy efficiency programs contribute to lower consumption by our customers. Rooftop solar installations continue to reduce residential and commercial volumes sold by SDG&E. As of December 31, 2018, 2017 and 2016, the residential and commercial rooftop solar capacity in SDG&E's territory totaled 1,023 MW, 836 MW and 694 MW, respectively. We discuss electric rate reform and the NEM program in "Item 7. MD&A – Factors Influencing Future Performance."

Demand for electricity is dependent on the health and expansion of the Southern California economy, prices of alternative energy products, consumer preference, environmental regulations, legislation, renewable power generation, the effectiveness of energy efficiency programs, demand-side management goals and distributed generation resources. California's energy policy supports increased electrification, particularly electrification of vehicles, which could result in significant increases in sales volumes in the coming years. Other external factors, such as the price of purchased power, the use of hydroelectric power, the use of and further development of renewable energy resources and energy storage, development of new natural gas supply sources, demand for natural gas and general economic conditions, can also result in significant shifts in the market price of electricity, which may in turn impact demand. Demand for electricity is also impacted by seasonal weather patterns (or "seasonality"), tending to increase in the summer months to meet cooling load and in the winter months to meet heating load.

Electric Resources. To meet customer demand, SDG&E procures power from its own electric generation facilities and from other suppliers through CPUC-approved purchased-power contracts or through purchases on a spot basis. SDG&E's supply as of December 31, 2018 is as follows:

SDG&E – ELECTRIC RESOURCES ⁽¹⁾			
	Contract expiration date	Net operating capacity (MW)	% of total
Owned generation facilities, natural gas ⁽²⁾		1,193	20%
Purchased-power contracts:			
Qualifying facilities	2024 to 2026	132	2
Renewables:			
Wind	2019 to 2041	1,209	21
Solar	2030 to 2041	1,306	22
Other	2019 and thereafter	199	4
Tolling and other ⁽³⁾	2019 to 2042	1,841	31
Total		5,880	100%

⁽¹⁾ Excludes approximately 107.5 MW of battery storage owned and approximately 13.5 MW of battery storage contracted.

⁽²⁾ SDG&E owns and operates four natural gas-fired power plants, three of which are in California and one of which is in Nevada.

⁽³⁾ Includes Otay Mesa VIE.

SDG&E is required to interconnect with and purchase power from QFs, a class of generating facilities established by the Public Utility Regulatory Policies Act of 1978, at rates that do not exceed SDG&E's avoided cost. For SDG&E, QFs include cogeneration facilities, which produce electricity and another form of useful thermal energy (such as heat or steam) used for industrial, commercial, residential or institutional purposes. Charges under most of the contracts with QFs are based on what it would incrementally cost SDG&E to produce the power or procure it from other sources. Charges under the contracts with other suppliers are for firm and as-generated energy and are based on the amount of energy received or are tolls based on available capacity. Tolling contracts are purchased-power contracts under which SDG&E provides natural gas for generation to the energy supplier. The prices under these contracts include 193 MW at prices that are based on the market value at the time the contracts were negotiated.

SDG&E provides bundled electric procurement service through various resources that are typically procured on a long-term basis, as shown above. While SDG&E provides such procurement service for the majority of its customer load, customers do have the ability to receive procurement service from a load serving entity other than SDG&E, through programs such as DA and CCA. DA is currently limited by a cap based on gigawatt hours. Utility customers can also receive procurement through CCA, if the customer's local jurisdiction (city) offers such a program. Several local political jurisdictions, including the City of San Diego and other municipalities, are considering implementing or are implementing a CCA, which could result in the departure of more than half of SDG&E's bundled load. When customers are served by another load serving entity, SDG&E no longer serves this departing load and the associated costs of the utility's procured resources could then be borne by its remaining bundled procurement customers. To help achieve the goal of ratepayer indifference (whether or not customers join CCAs) the CPUC revised the PCIA framework by adopting several refinements, which SDG&E implemented on January 1, 2019. We discuss PCIA, DA and CCA further in "Item 7. MD&A – Factors Influencing Future Performance – SDG&E – Potential Impacts of Community Choice Aggregation and Direct Access."

Natural Gas Supply for Generation Facilities. SDG&E procures natural gas under short-term contracts for its owned generation facilities and for certain tolling contracts associated with purchased-power arrangements. Purchases are from various southwestern U.S. suppliers and are primarily priced based on published monthly bid-week indices.

Power Pool. SDG&E is a participant in the Western Systems Power Pool, which includes an electric-power and transmission-rate agreement that allows access to power trading with more than 300 member utilities, power agencies, energy brokers and power marketers located throughout the U.S. and Canada. Participants can make power transactions on standardized terms, including market-based rates, preapproved by the FERC. Participation in the Western Systems Power Pool is intended to assist members in managing power delivery and price risk.

Electric Transmission and Distribution System. Service to SDG&E's customers is supported by its electric transmission and distribution system. At December 31, 2018, SDG&E's electric transmission and distribution facilities included substations and overhead and underground lines. These electric facilities are in San Diego, Imperial and Orange counties of California, and in Arizona and Nevada. The facilities consist of 2,089 miles of transmission lines, 23,591 miles of distribution lines and 161 substations. Periodically, various areas of the service territory require expansion to accommodate customer growth, reliability and safety.

SDG&E's 500-kV Southwest Powerlink transmission line, which is shared with Arizona Public Service Company and Imperial Irrigation District, extends from Palo Verde, Arizona to San Diego, California. SDG&E's share of the line is 1,162 MW, although it can be less under certain system conditions. SDG&E's Sunrise Powerlink is a 500-kV transmission line constructed and operated by SDG&E with import capability of 1,000 MW of power.

Mexico's Baja California transmission system is connected to SDG&E's system via two 230-kV interconnections with combined capacity of up to 408 MW in the north-to-south direction and 800 MW in the south-to-north direction, although it can be less under certain system conditions.

Edison's transmission system is connected to SDG&E's system via five 230-kV transmission lines.

Competition. SDG&E faces competition to serve its customer load from the growth in distributed and local power generation, including rooftop solar installations and battery storage, and the corresponding decrease in demand for power delivered through SDG&E's electric transmission and distribution system and from departing retail load from customers transferring to load serving entities other than SDG&E, through programs such as DA and CCA. SDG&E does not earn any return on commodity sales volumes.

Natural Gas Utility Operations

We discuss SDG&E's natural gas utility operations below in "California Utilities' Natural Gas Utility Operations."

Key Noncash Performance Indicators

We use certain financial and non-financial metrics to measure how effective our businesses are in achieving their key business objectives. For SDG&E, these key noncash performance indicators include number of customers, electricity sold, system average rate and natural gas volumes transported and sold. Additional noncash performance indicators include goals related to safety (including activities designed to help reduce the risk of wildfires), customer service, company reputation, environmental considerations (including quantities of renewable energy purchases), on-time and on-budget completion of major projects and initiatives, and service reliability.

SoCalGas

SoCalGas is a regulated public utility that owns and operates a natural gas distribution, transmission and storage system that supplies natural gas to a population of approximately 21.9 million, covering a 24,000 square mile service territory that encompasses Southern California and portions of central California (excluding San Diego County, the city of Long Beach and the desert area of San Bernardino County).

Natural Gas Utility Operations

We provide additional information on SoCalGas' natural gas utility operations below in "California Utilities' Natural Gas Utility Operations."

Key Noncash Performance Indicators

Key noncash performance indicators for SoCalGas include number of customers and natural gas volumes transported and sold. Additional noncash performance indicators include goals related to safety, customer service, company reputation, environmental considerations, natural gas demand by customer segment, on-time and on-budget completion of major projects and initiatives, and service reliability.

California Utilities' Natural Gas Utility Operations

Customers and Demand

SoCalGas and SDG&E sell, distribute and transport natural gas. SoCalGas purchases and stores natural gas for its core customers and SDG&E's core customers on a combined portfolio basis and provides natural gas storage services for others.

CALIFORNIA UTILITIES – NATURAL GAS CUSTOMER METERS AND VOLUMES

	Customer meter	Volumes (Bcf) ⁽¹⁾		
	count	Years ended December 31,		
	December 31,	2018	2017	2016
SDG&E:				
Residential	856,900			
Commercial	28,700			
Electric generation and transportation	3,400			
Natural gas sales		40	40	40
Transportation		28	35	31
Total	889,000	68	75	71
SoCalGas:				
Residential	5,722,200			
Commercial	248,000			
Industrial	25,300			
Electric generation and wholesale	40			
Natural gas sales		297	301	294
Transportation		553	603	610
Total	5,995,540	850	904	904

⁽¹⁾ Includes intercompany sales.

For regulatory purposes, end-use customers are classified as either core or noncore customers. Core customers are primarily residential and small commercial and industrial customers.

Most core customers purchase natural gas directly from SoCalGas or SDG&E. While core customers are permitted to purchase directly from producers, marketers or brokers, the California Utilities are obligated to provide reliable supplies of natural gas to serve the requirements of their core customers. A substantial portion of SoCalGas' revenues are from core customers.

Noncore customers at SoCalGas consist primarily of electric generation, wholesale, large commercial and industrial, and enhanced oil recovery customers. A portion of SoCalGas' noncore customers are non-end-users. SoCalGas' non-end-users include wholesale customers consisting primarily of other IOUs, including SDG&E, or municipally owned natural gas distribution systems. Noncore customers at SDG&E consist primarily of electric generation and large commercial customers.

Noncore customers are responsible for the procurement of their natural gas requirements, as the regulatory framework does not allow us to recover the actual cost of natural gas procured and delivered to noncore customers.

No single customer accounted for 10 percent or more of SoCalGas' or SDG&E's revenues from natural gas operations in 2018, 2017 or 2016.

Demand for natural gas largely depends on the health and expansion of the Southern California economy, prices of alternative energy products, consumer preference, environmental regulations, legislation, California's energy policy supporting increased electrification and renewable power generation, and the effectiveness of energy efficiency programs. Other external factors such as weather, the price of electricity, the use of hydroelectric power, the use of and further development of renewable energy resources and energy storage, development of new natural gas supply sources, demand for natural gas outside the State of California, and general economic conditions can also result in significant shifts in market price, which may in turn impact demand.

One of the larger sources for natural gas demand is electric generation. Natural gas-fired electric generation within Southern California (and demand for natural gas supplied to such plants) competes with electric power generated throughout the western U.S. Natural gas transported for electric generating plant customers may be affected by the overall demand for electricity, growth in self-generation from rooftop solar, the addition of more efficient gas technologies, new energy efficiency initiatives, and the extent that regulatory changes in electric transmission infrastructure investment divert electric generation from the California Utilities' respective service areas. The demand for natural gas may also fluctuate due to volatility in the demand for electricity due to climate change, weather conditions and other impacts, and the availability of competing supplies of electricity such as hydroelectric generation and other renewable energy sources. Given the significant quantity of natural gas-fired generation, natural gas is the dispatchable fuel of choice to help ensure electric reliability in our California service territories.

The natural gas distribution business is seasonal, and cash provided from operating activities generally is greater during and immediately following the winter heating months. As is prevalent in the industry, but subject to current regulatory limitations, SoCalGas usually injects natural gas into storage during the summer months (April through October), which reduces cash provided by operating activities during this period, and usually withdraws natural gas from storage during the winter months (November through March), which increases cash provided by operating activities, when customer demand is higher.

Natural Gas Procurement and Transportation

At December 31, 2018, SoCalGas' natural gas facilities include 3,062 miles of transmission and storage pipelines, 50,863 miles of distribution pipelines, 48,202 miles of service pipelines and nine transmission compressor stations, while SDG&E's natural gas facilities consist of 168 miles of transmission pipelines, 8,966 miles of distribution pipelines, 6,562 miles of service pipelines and one compressor station.

SoCalGas purchases natural gas under short-term and long-term contracts for the California Utilities' residential and smaller business customers. SoCalGas purchases natural gas from various sources, including from Canada, the U.S. Rockies and the southwestern regions of the U.S. Purchases of natural gas are primarily priced based on published monthly bid-week indices.

To help ensure the delivery of natural gas supplies to its distribution system and to meet the seasonal and annual needs of customers, SoCalGas has firm interstate pipeline capacity contracts that require the payment of fixed reservation charges to reserve firm transportation rights. Energy companies, primarily El Paso Natural Gas Company, Transwestern Pipeline Company and Kern River Gas Transmission Company, provide transportation services into SoCalGas' intrastate transmission system for supplies purchased by SoCalGas or its transportation customers from outside of California.

Natural Gas Storage

SoCalGas owns four natural gas storage facilities. These facilities have a combined working gas capacity of 137 Bcf and have over 200 injection, withdrawal and observation wells that provide natural gas storage services for core, noncore and non-end-use customers. SoCalGas' and SDG&E's core customers are allocated a portion of SoCalGas' storage capacity. SoCalGas offers the remaining storage capacity for sale to others, including SDG&E for its non-core customer requirements. Natural gas withdrawn from storage is important for ensuring service reliability during peak demand periods, including heating needs in the winter, as well as peak electric generation needs in the summer. The Aliso Canyon natural gas storage facility represents 63 percent of SoCalGas' natural gas storage capacity. SoCalGas discovered a natural gas leak at one of its wells at the Aliso Canyon natural gas storage facility in October 2015 and permanently sealed the well in February 2016. SoCalGas was subsequently authorized to make limited withdrawals and injections of natural gas at the Aliso Canyon natural gas storage facility and, as of July 2018, has been directed by the CPUC to maintain up to 34 Bcf of working gas to help achieve reliability for the region at reasonable rates as determined by the CPUC. We discuss the Aliso Canyon natural gas storage facility leak in Note 16 of the Notes to Consolidated Financial Statements, in "Item 7. MD&A – Factors Influencing Future Performance" and in "Item 1A. Risk Factors."

Sempra Texas Utility

Sempra Texas Utility is comprised of our equity method investment in Oncor Holdings, which we acquired in March 2018. We discuss the acquisition in Note 5 of the Notes to Consolidated Financial Statements. Oncor Holdings is a direct, wholly owned subsidiary of Sempra Texas Intermediate Holding Company LLC and owns an 80.25-percent interest in Oncor. TTI owns the remaining 19.75-percent interest in Oncor. Oncor is a limited liability company organized under the laws of the State of Delaware.

Certain ring-fencing measures, existing governance mechanisms and commitments, which we describe in "Item 1A. Risk Factors," remain in effect following the Merger and are intended to enhance Oncor Holdings' and Oncor's separateness from their owners and to mitigate the risk that these entities would be negatively impacted by the bankruptcy of, or other adverse financial developments affecting, their owners. Sempra Energy does not control Oncor Holdings or Oncor, and the ring-fencing measures, governance mechanisms and commitments limit our ability to direct the management, policies and operations of Oncor Holdings and Oncor, including the deployment or disposition of their assets, declarations of dividends, strategic planning and other important corporate issues and actions. These limitations include limited representation on the Oncor Holdings and Oncor boards of directors, as Oncor Holdings and Oncor will continue to have a majority of independent directors. Thus, Oncor Holdings and Oncor will continue to be managed independently (i.e., ring-fenced). As such, we account for our 100-percent ownership interest in Oncor Holdings as an equity method investment. See Note 6 of the Notes to Consolidated Financial Statements for information about our equity method investment in Oncor Holdings.

Oncor

Oncor is a regulated electric transmission and distribution utility that operates in the north-central, eastern and western parts of Texas. This territory has an estimated population of approximately 10 million. Oncor provides the essential service of delivering electricity to end-use consumers through its electrical systems, as well as providing transmission grid connections to merchant generation facilities and interconnections to other transmission grids in Texas.

At December 31, 2018, Oncor had approximately 4,015 full-time employees, including approximately 740 employees under collective bargaining agreements.

Customers and Demand. Oncor operates the largest transmission and distribution system in Texas, delivering electricity to more than 3.6 million homes and businesses and operating approximately 137,000 miles of transmission and distribution lines as of December 31, 2018. Oncor is not a seller of electricity, nor does it purchase electricity for resale. Rather, Oncor provides transmission services to electricity distribution companies, cooperatives and municipalities and distribution services to retail electric providers that sell electricity to retail customers. At December 31, 2018, Oncor's distribution customers consisted of approximately 90 retail electric providers and certain electric cooperatives in its certificated service area. The consumers of the electricity Oncor delivers are free to choose their electricity supplier from retail electric providers who compete for their business.

Oncor's transmission and distribution assets are located principally in the north-central, eastern and western parts of Texas. This territory is comprised of over 110 counties and more than 400 incorporated municipalities, including Dallas/Fort Worth and surrounding suburbs, as well as Waco, Wichita Falls, Odessa, Midland, Tyler and Killeen. Most of Oncor's power lines have been constructed over lands of others pursuant to easements or along public highways, streets and rights-of-way as permitted by law.

Oncor's revenues and results of operations are subject to seasonality, weather conditions and other electricity usage drivers, with revenues being highest in the summer.

Electricity Transmission. Oncor’s electricity transmission business is responsible for the safe and reliable operations of its transmission network and substations. These responsibilities consist of the construction and maintenance of transmission facilities and substations and the monitoring, controlling and dispatching of high-voltage electricity over its transmission facilities in coordination with ERCOT, which we discuss below in “Regulation – ERCOT Market.”

At December 31, 2018, Oncor’s transmission system included approximately 16,000 circuit miles of transmission lines, 306 transmission stations and 740 distribution substations, which are interconnected to 75 generation facilities totaling 36,918 MW.

Transmission revenues are provided under tariffs approved by either the PUCT or, to a small degree related to an interconnection to other markets, the FERC. Network transmission revenues compensate Oncor for delivery of electricity over transmission facilities operating at 60 kV and above. Other services offered by Oncor through its transmission business include system impact studies, facilities studies, transformation service and maintenance of transformer equipment, substations and transmission lines owned by other parties.

Electricity Distribution. Oncor’s electricity distribution business is responsible for the overall operation of distribution facilities, including electricity delivery, power quality and system reliability. These responsibilities consist of the ownership, management, construction, maintenance and operation of the distribution system within its certificated service area. Oncor’s distribution system receives electricity from the transmission system through substations and distributes electricity to end-users and wholesale customers through 3,562 distribution feeders.

Oncor’s distribution system included over 3.6 million points of delivery at December 31, 2018 and consisted of approximately 121,000 miles of overhead conductors and underground conductors.

Distribution revenues from residential and small business users are based on actual monthly consumption (kWh) and, depending on size and annual load factor, revenues from large commercial and industrial users are based either on actual monthly demand (kW) or the greater of actual monthly demand (kW) or 80 percent of peak monthly demand during the prior eleven months.

Competition. Oncor operates in certificated areas designated by the PUCT. The majority of Oncor’s service territory is single certificated, with Oncor as the only certificated transmission and distribution provider. However, in multi-certificated areas of Texas, Oncor competes with certain utilities and rural electric cooperatives for the right to serve end-use customers.

Sempra South American Utilities

Sempra South American Utilities develops, owns and operates, or holds interests in electric transmission, distribution and generation infrastructure through its two utilities, Chilquinta Energía in Chile and Luz del Sur in Peru. It also owns interests in two energy-services companies, Tecnored and Tecsur, that provide electric construction and infrastructure services to Chilquinta Energía and Luz del Sur, respectively, as well as third parties. Tecnored also sells electricity to non-regulated customers.

On January 25, 2019, our board of directors approved a plan to sell our South American businesses. We expect to complete the sales process by the end of 2019.

Chilquinta Energía S.A.

Chilquinta Energía, an indirect wholly owned subsidiary of Sempra Energy, is an electric distribution utility serving a population of approximately 1.8 million in the region of Valparaíso in central Chile and approximately 130,000 in the communities of Parral and Linares in the south-central region of Maule, with a combined service area covering approximately 4,100 square miles. In December 2018, Chilquinta Energía acquired CTNG, which owns regulated transmission assets, as we discuss in Note 5 of the Notes to Consolidated Financial Statements. Chilquinta Energía is the third largest electricity distribution company in Chile, with an approximate 9-percent share of the market.

Customers and Demand. Chilquinta Energía provides electric services through the transmission and distribution of electricity to the following customer classes:

CHILQUINTA ENERGÍA – ELECTRIC CUSTOMER METERS AND VOLUMES

	Customer meter count	Volumes (millions of kWh)		
	December 31,	Years ended December 31,		
	2018	2018	2017	2016
Residential	667,240	1,198	1,136	1,104
Commercial	44,905	1,181	1,211	1,178
Industrial	1,378	480	500	527
Street and highway lighting	8,419	89	89	91
	721,942	2,948	2,936	2,900
Tolling	100	303	98	90
Total	722,042	3,251	3,034	2,990

In Chile, customers are classified as regulated or non-regulated based on installed capacity. Regulated customers are those whose installed capacity is less than 500 kW. Non-regulated customers are those whose installed capacity is greater than 5,000 kW. Customers with installed capacity between 500 kW and 5,000 kW may choose to be classified as regulated or non-regulated. Non-regulated customers that can buy power from other sources, such as directly from the generator, are classified as tolling customers. Both regulated and non-regulated customers pay transmission and distribution tariffs for the transportation of their electricity through the system. There is no risk of stranded costs for Chilquinta Energía because PPAs with generators are not take-or-pay contracts; rather, Chilquinta Energía only purchases power taken by its customers.

Demand for electricity depends on the growth and stability of the Chilean economy, customer growth and preferences, price of electricity, policies and environmental regulations driving the substitution of alternative energy products for wood and coal, legislation and energy policy supporting increased electrification of the public and private transportation sector, and the roll out and expansion of energy efficiency programs and distributed generation resources.

The price of electricity can be affected by the growth of renewable power generation, the amount of hydroelectric power, the market price of oil and natural gas, and transmission and distribution service tariffs.

Other factors that can affect the demand for electricity include weather and seasonality. Demand for electricity at Chilquinta Energía is higher in the winter months to meet heating load and tends to decrease during the mild temperatures in the summer months.

Electric Resources. The supply of electric power available to Chilquinta Energía comes from purchased-power contracts currently in place with various suppliers. The supply as of December 31, 2018 was as follows:

CHILQUINTA ENERGÍA – ELECTRIC RESOURCES

	Contract expiration date	Net operating capacity (MW)	% of total
Purchased-power contracts:			
Thermal ⁽¹⁾	2023 to 2036	263	54%
Hydro	2023 to 2036	148	30
Wind/solar	2023 to 2036	65	13
Biomass	2023 to 2036	15	3
Total		491	100%

⁽¹⁾ Contracts with fuel sources that include natural gas, coal or diesel are collectively referred to as thermal.

Power Generation System. The National Electric System is operated and coordinated by the National Electric Coordinator (Coordinador Eléctrico Nacional). This institution is managed by a Directive Council (Consejo Directivo) formed by five members designated through a public tender. This entity coordinates the operation of the nationwide interconnected electric system.

Transmission System and Access. At December 31, 2018, Chilquinta Energía’s electric facilities include 10,360 miles of distribution lines, 548 miles of transmission lines and 53 substations. Chilquinta Energía also owns a 50-percent interest in Eletrans, which operates a 97-mile, 220-kV double circuit transmission line in the Atacama region of northern Chile, and a 46-mile, 220-kV double circuit transmission line in the Los Rios region of southern Chile.

Transmission lines in Chile are either part of the main transmission system (the national system) or the sub-transmission system (the zonal system). Sub-transmission systems, including those owned by Chilquinta Energía, are comprised of infrastructure that is interconnected to the electricity system to supply non-regulated and regulated end-users located in the distribution service area.

We discuss ongoing transmission line projects at Chilquinta Energía’s JVs in “Item 7. MD&A – Factors Influencing Future Performance.”

Competition. Chilquinta Energía faces limited competition from the growth in rooftop solar installations, as electricity prices remain competitive and tariffs compensate self-generators only for the commodity component of the energy delivered to the grid. Presently, there are no public programs or incentives promoting the adoption of distributed energy generation.

In addition, the National Electric Coordinator will be tendering a significant number of projects, divided between extension work and new development work, for sub-transmission systems. The new development projects in these tenders will be opened to independent developers, allowing such developers to compete with incumbent utilities for their construction and operation.

Luz del Sur S.A.A.

Sempra Energy indirectly owns 83.6 percent of Luz del Sur, an electric distribution utility that serves a population of approximately 4.9 million in the southern zone of metropolitan Lima, Peru, with a service area covering approximately 1,400 square miles. Luz del Sur delivers approximately 30 percent of all power used in Peru. The remaining shares of Luz del Sur are held by NCI and trade on the Lima Stock Exchange (Bolsa de Valores de Lima) under the symbol LUSURC1. The shares are subject to regulation by the Superintendencia del Mercado de Valores (Superintendency of Securities Market).

Customers and Demand. Luz del Sur provides electric services through the generation, transmission and distribution of electricity to the following customer classes:

LUZ DEL SUR – ELECTRIC CUSTOMER METERS AND VOLUMES

	Customer meter count	Volumes (millions of kWh)		
	December 31,	Years ended December 31,		
	2018	2018	2017	2016
Residential	1,022,932	2,995	2,930	2,896
Commercial	101,236	2,254	2,416	2,647
Industrial	4,166	623	784	1,021
Street and highway lighting	5,428	246	206	201
Free	164	642	663	622
	1,133,926	6,760	6,999	7,387
Tolling	362	2,385	1,922	1,365
Total	1,134,288	9,145	8,921	8,752

In Peru, customers are classified as regulated or non-regulated based on capacity demand. Regulated customers are those whose capacity demand is less than 200 kW and their energy supply is considered public service. Non-regulated customers, which are free and tolling customers, are those whose capacity demand is greater than 2,500 kW. Customers with capacity demand between 200 kW and 2,500 kW may choose to be classified as regulated or non-regulated. Free customers purchase power directly from a utility and pay the utility a fee for generation, transmission (primary and secondary) and distribution services. Tolling customers purchase power from alternate suppliers and pay only a tolling fee to the utility for secondary transmission and distribution services. Utilities in Peru, including Luz del Sur, generally have PPAs with generators to serve their regulated and free customers’ load. Because the power purchased by Luz del Sur from generators is generally based on take-or-pay contracts, Luz del Sur is exposed to the risk of stranded costs associated with capacity charges, as we discuss in “Item 7. MD&A – Factors Influencing Future Performance.”

Demand for electricity depends on the stability and growth of the Peruvian economy, customer growth and usage preferences, electricity prices, legislation and energy policy supporting increased electrification within our service territory. The price of

electricity can be affected by changes in energy policy, volatility of spot market prices, the amount of hydroelectric power, the market price of oil and natural gas, changes in inflation and foreign exchange rates, new technologies and transmission and distribution service tariffs, which may also impact demand for electricity. Other factors that can affect the demand for electricity include weather and seasonality. Demand for electricity at Luz del Sur is higher in the summer months to meet cooling load and tends to decrease during the colder temperatures in the winter months.

Electric Resources. The supply of electric power available to Luz del Sur comes from purchased-power contracts currently in place with various suppliers, its own electric generation facility or purchases made on an as-needed basis. This supply as of December 31, 2018 was as follows:

LUZ DEL SUR – ELECTRIC RESOURCES			
	Contract expiration date	Firm contracted capacity (MW)	% of total
Owned generation facility, hydro ⁽¹⁾		61	3 %
Purchased-power contracts:			
Thermal ⁽²⁾	2021-2027	700	37
Hydro	2021-2027	405	21
Combined thermal/hydro	2019-2027	750	39
Total		1,916	100 %

⁽¹⁾ *Santa Teresa has a nameplate capacity of 100 MW with an associated firm capacity estimated at 61 MW based on guidelines established by the system operator in Peru and historical water flows. Available excess capacity is sold in the spot market.*

⁽²⁾ *Contracts with fuel sources that include natural gas, coal or diesel are collectively referred to as thermal.*

Power Generation System. The Sistema Eléctrico Interconectado Nacional (SEIN) is the Peruvian national interconnected system. The OSINERGMIN, in addition to setting tariffs, supervises the bidding processes for energy purchases between distribution companies and generators.

The Committee of Economic Operation of the National Interconnected System (Comité de Operación Económica del Sistema Interconectado Nacional) coordinates the operation and dispatch of electricity of the SEIN.

Transmission System and Access. At December 31, 2018, Luz del Sur’s electric facilities consisted of 14,323 miles of distribution lines, 232 miles of transmission lines and 44 substations. Luz del Sur also owns and operates Santa Teresa, a 100-MW hydroelectric power plant located in the Cusco region of Peru.

Transmission lines in Peru are divided into principal and secondary systems. The principal system lines are accessible by all generators and allow the flow of energy through the national grid. The secondary system lines connect principal transmission with the network of distribution companies or connect directly to certain final customers. The transmission company receives tariff revenues and collects tolls based on a charge per unit of electricity.

We discuss ongoing transmission line and substation projects at Luz del Sur in “Item 7. MD&A – Factors Influencing Future Performance.”

Competition. While electric distribution companies in Peru are considered natural monopolies, users consuming more than 200 kW are free to choose the company of their preference, including Luz del Sur, to provide them with electric power.

Key Noncash Performance Indicators

Key noncash performance indicators for our South American electric distribution utilities’ operations are customer count and consumption and transmission line losses. Additional noncash performance indicators include goals related to safety, environmental considerations, electric reliability and regulatory compliance.

Sempra Mexico

Our Sempra Mexico segment includes the operating companies of our subsidiary, IEnova, as well as certain holding companies and risk management activity. IEnova develops, builds and operates energy infrastructure in Mexico in two key energy markets: gas and power. IEnova's gas business offers pipeline services for natural gas, LPG and ethane, as well as storage for LNG and LPG and distribution of natural gas. Currently, IEnova is constructing four marine terminals for the receipt, storage and delivery of hydrocarbons, in addition to two land terminals. In its power business, IEnova operates a natural-gas-fired combined-cycle plant and two wind power generation facilities and is constructing four new solar power generation facilities, in addition to the expansion of its Energía Sierra Juárez wind power generation facility.

Sempra Energy owns 66.5 percent of IEnova as of December 31, 2018, with the remaining shares held by NCI and traded on the Mexican Stock Exchange under the symbol IENOVA. The Mexican National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, or CNBV), regulates the shares, which are registered with the Mexican National Securities Registry (Registro Nacional de Valores) maintained by the CNBV. We discuss IEnova's NCI and its acquisition and divestiture activities in Notes 1 and 5, respectively, of the Notes to Consolidated Financial Statements.

The following discussions provide information about Sempra Mexico's businesses that were operational as of December 31, 2018. See "Item 7. MD&A – Factors Influencing Future Performance" for information about projects in development or under construction.

Gas Business

Pipelines and Related Assets/Facilities. At December 31, 2018, Sempra Mexico's assets/facilities consisted of 1,353 miles of natural gas transmission pipelines, 12 compressor stations, 139 miles of ethane pipelines, 118 miles of LPG pipelines and one LPG storage terminal in Mexico. These assets are contracted under long-term, U.S. dollar-based agreements with major industry participants such as the CFE, CENAGAS, PEMEX, Shell, Gazprom, Saavi Energy Solutions, LLC and other similar counterparties.

In 2018, our pipeline assets in Mexico had design capacity of approximately 13,901 MMcf per day of natural gas, 204 MMcf per day of ethane gas, 106,000 barrels per day of ethane liquid, 34,000 barrels per day of LPG transmission and 80,000 barrels of LPG storage.

LNG. Sempra Mexico operates its ECA LNG regasification terminal on land it owns in Baja California, Mexico. The ECA LNG regasification terminal is capable of processing 1 Bcf of natural gas per day and generates revenues from reservation and usage fees under terminal capacity agreements and nitrogen injection service agreements with Shell and Gazprom, expiring in 2028, that permit them, together, to use one-half of the terminal's capacity.

In connection with Sempra LNG & Midstream's LNG purchase agreement with Tangguh PSC, Sempra Mexico purchases from Sempra LNG & Midstream the LNG delivered to ECA by Tangguh PSC. Sempra Mexico uses the natural gas produced from this LNG and natural gas purchased in the market or through Sempra LNG & Midstream's marketing operations to supply a contract for the sale of natural gas to Mexico's national electric company, the CFE, at prices that are based on the SoCal Border index. If LNG volumes received from Tangguh PSC are not sufficient to satisfy the commitment to the CFE, Sempra Mexico may purchase natural gas from Sempra LNG & Midstream's natural gas marketing operations.

Sempra LNG & Midstream has an agreement with Sempra Mexico to supply LNG to the ECA LNG terminal. Although the LNG purchase agreement specifies a number of cargoes to be delivered annually, actual cargoes delivered have been significantly lower than the maximum specified under the agreement. As a result, Sempra LNG & Midstream is contractually required to make monthly indemnity payments to Sempra Mexico for failure to deliver the contracted LNG.

The LNG regasification business is impacted by worldwide LNG market prices. High LNG prices in markets outside the market in which IEnova's LNG terminal operates have resulted and could continue to result in lower than expected deliveries of LNG cargoes to the ECA LNG terminal from third parties under existing supply agreements, which could increase costs if IEnova is instead required to obtain LNG in the open market at prevailing prices. Any inability to obtain expected LNG cargoes could also impact IEnova's ability to maintain the minimum level of LNG required to keep the ECA LNG terminal in operation at the proper temperature. Prices in international LNG markets through which IEnova must purchase natural gas to meet its contractual obligations to deliver natural gas to customers may also affect IEnova's LNG marketing operations, which could have an adverse impact on its earnings, but may be mitigated in part by the indemnity payments discussed above.

Sempra Mexico's LNG marketing operations sell natural gas to the CFE and other customers under supply agreements. Sempra Mexico recognizes the revenue from the sale of natural gas upon transfer of the natural gas via pipelines to the customers at the agreed upon delivery points, and in the case of the CFE, at its thermoelectric power plants.

Natural Gas Distribution. Sempra Mexico's natural gas distribution regulated utility, Ecogas, operates in three separate distribution zones in Mexico with approximately 2,453 miles of pipeline, and had approximately 123,000 customer meters (serving more than 400,000 residential, commercial and industrial consumers) with sales volume of approximately 18 MMcf per day in 2018.

Ecogas relies on affiliates, Sempra LNG & Midstream and SoCalGas, for the supply and transportation of natural gas that it distributes to its customers. If these affiliates fail to perform and Ecogas is unable to obtain supplies of natural gas from alternate sources, Ecogas could lose customers and sales volume and could also be exposed to commodity price risk and volatility.

Ecogas faces competition from other distributors of natural gas in each of its three distribution zones in Mexicali, Chihuahua and La Laguna-Durango as other distributors of natural gas build or consider building natural gas distribution systems and compete with Ecogas for customers.

Power Business

Wind Power Generation. Sempra Mexico develops, invests in and operates renewable energy generation facilities that have long-term PPAs to sell the electricity they generate to its customers, which are generally load serving entities, as well as industrial and other customers. Load serving entities sell electric service to their end-users and wholesale customers immediately upon receipt of our power delivery, while industrial and other customers consume the electricity to run their facilities. In 2018, Sempra Mexico had contracted capacity of 407 MW for its ownership share of fully operating wind energy generation facilities.

Natural Gas-Fired Generation. TdM is a 625-MW natural gas-fired power plant located in Mexicali, Baja California, Mexico that generates revenue from selling electricity and/or resource adequacy to the California ISO and to governmental, public utility and wholesale power marketing entities. It also has an EMA with Sempra LNG & Midstream for energy marketing, scheduling and other related services to support its sales of generated power into the California electricity market. Under the EMA, TdM pays fees to Sempra LNG & Midstream for these revenue-generating services. TdM also purchases fuel from Sempra LNG & Midstream. Sempra Mexico records revenue for the sale of power generated by TdM and records cost of sales for the purchases of natural gas and energy management services provided by Sempra LNG & Midstream.

TdM competes daily with other generating plants that supply power into the California electricity market. Several of the wholesale markets supplied by merchant power plants have experienced significant pricing declines due to excess supply. IEnova manages commodity price risk at TdM by optimizing a mix of forward on-peak energy sales, daily and hourly spot market sales of capacity, energy and ancillary services, and longer-term structured transactions, as well as avoiding short positions.

Demand and Competition

The overall demand for natural gas distribution services increases during the winter months. Conversely, in the power business, the overall demand for electricity is greater during the summer months.

IEnova competes with Mexican and foreign companies for certain new energy infrastructure projects in Mexico. Some of its competitors (including, but not limited to, public or state-operated companies, their subsidiaries and affiliates) may have better access to capital and greater financial and other resources, which could give them a competitive advantage in bidding for such projects.

Sempra Mexico's pipeline and storage facilities businesses compete with other regulated and unregulated pipelines and storage facilities. They compete primarily on the basis of price (in terms of storage and transportation fees), available capacity and interconnections to downstream markets.

Sempra Mexico's gas business competitors include, among others:

- Bulkmatic Transport Company, Inc.
- Carso Energy S.A. de C.V.
- CFE
- Corporativo Lodemo, S.A. de C.V.
- Enagás, S.A.
- Engie S.A.
- Fermaca Global LP
- Glencore plc
- Invex Controladora S.A.B. de C.V.
- Kinder Morgan, Inc.
- Monterra Energy LLC
- Naturgy Energy Group S.A.
- PEMEX
- TOTAL S.A.
- TransCanada

Generation from Sempra Mexico's renewable energy assets is susceptible to fluctuations in naturally occurring conditions such as wind and inclement weather. Because Sempra Mexico sells power that it generates at its Energía Sierra Juárez wind power

generation facility into California, Sempra Mexico's future performance and the demand for renewable energy may be impacted by U.S. state mandated requirements to deliver a portion of total energy load from renewable energy sources. The rules governing these requirements in California are generally known as the RPS Program. In California, certification of a generation project by the CEC as an ERR allows the purchase of output from such generation facility to be counted towards fulfillment of the RPS Program requirements, if such purchase meets the provisions of SB X1-2. The RPS Program may affect the demand for output from renewables projects developed by Sempra Mexico, particularly the demand from California's utilities. We expect to receive ERR certification for all our Sempra Mexico renewable facilities providing power to California as they become operational.

Sempra Mexico's power business competitors include, among others:

- Engie S.A.
- Enel SpA
- Iberdrola S.A.

Key Noncash Performance Indicators

Key noncash performance indicators for Sempra Mexico include sales volume, plant or facility availability, capacity utilization and, for its distribution operations, customer count and consumption. Additional noncash performance indicators include obtaining and completing (on time and on budget) major projects, compliance with reliability and regulatory standards, and goals related to safety, environmental considerations and regulatory performance.

Sempra Renewables

Sempra Renewables develops, owns and operates, or holds interests in, wind energy generation facilities in the U.S. that have long-term PPAs to sell the electricity and the related green energy attributes they generate to its customers, which are generally load serving entities. Load serving entities sell electric service to their end-users and wholesale customers immediately upon receipt of our power delivery.

On June 25, 2018, our board of directors approved a plan to divest all our non-utility U.S. wind and U.S. solar assets. On December 13, 2018, Sempra Renewables completed the sale of its solar assets, solar and battery storage development projects, as well as its ownership interest in one wind facility, to a subsidiary of Con Ed for \$1.6 billion. In February 2019, Sempra Renewables entered into an agreement with American Electric Power to sell its remaining wind assets and investments for \$551 million, subject to working capital adjustments and customary closing conditions. We expect to complete the sale in the second quarter of 2019. We provide further information related to these sales in Note 5 of the Notes to Consolidated Financial Statements.

Certain of Sempra Renewables' wind power facilities (and certain solar power facilities that were sold to a subsidiary of Con Ed) are held by limited liability companies whose members include financial institutions. These financial institutions are noncontrolling tax equity investors to which earnings, tax attributes and cash flows are allocated in accordance with the respective limited liability company agreements. We discuss these tax equity arrangements in "Variable Interest Entities" and in "Noncontrolling Interests" in Note 1 of the Notes to Consolidated Financial Statements.

Sempra Renewables' remaining wind energy generation facilities that were operational as of December 31, 2018 have a contracted capacity of 1,260 MW and are fully contracted under long-term PPAs for 15 to 25 years.

Demand and Competition

Generation from Sempra Renewables' remaining renewable energy assets consisting of wind energy generation facilities is susceptible to fluctuations in naturally occurring conditions such as wind and inclement weather.

Sempra Renewables primarily competes for wholesale contracts for the generation and sale of electricity. Sempra Renewables also competes with other non-utility generators, regulated utilities unregulated subsidiaries of regulated utilities and other energy service companies for sales of non-contracted renewable energy. The number and type of competitors may vary based on location, generation type and project size.

Our renewable energy competitors include, among others:

- EDF Energy
- Invenery
- MidAmerican Energy
- NextEra Energy Resources
- Southern Company

Key Noncash Performance Indicators

Key noncash performance indicators for Sempra Renewables include capacity factors, plant availability and sales volume at our renewable energy facilities. Additional noncash performance indicators include goals related to safety, environmental considerations and compliance with reliability standards.

Sempra LNG & Midstream

Sempra LNG & Midstream develops, owns and operates, or holds interests in, LNG and natural gas midstream assets and operations in North America, including Cameron LNG JV, natural gas pipelines and marketing operations.

On February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners. We discuss this sale below and in Notes 5 and 12 of the Notes to Consolidated Financial Statements.

LNG

Sempra LNG & Midstream and three project co-owners hold interests in Cameron LNG JV for the development, construction and operation of a three-train natural gas liquefaction export facility at the existing Cameron LNG, LLC terminal formerly used for regasification in Hackberry, Louisiana, a project developed and permitted by Sempra LNG & Midstream. Sempra LNG & Midstream accounts for its 50.2-percent equity interest in Cameron LNG JV under the equity method. Cameron LNG JV began construction in the second half of 2014 on the natural gas liquefaction export facility using the existing regasification infrastructure contributed by Sempra LNG & Midstream. Cameron LNG JV has authorization to export LNG to both FTA and non-FTA countries.

The three liquefaction trains are designed to have a nameplate capacity of 13.9 Mtpa of LNG with an expected export capability of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. Cameron LNG JV has 20-year liquefaction and regasification tolling capacity agreements in place with affiliates of TOTAL S.A., Mitsubishi Corporation and Mitsui & Co., Ltd., which subscribe the full nameplate capacity of three trains at the facility. In addition, Cameron LNG JV is working on the development of up to two additional trains. We discuss Cameron LNG JV in Note 6 of the Notes to Consolidated Financial Statements and the construction of the first three trains and the potential for an additional two trains in “Item 7. MD&A – Factors Influencing Future Performance” and in “Item 1A. Risk Factors.”

Sempra Energy is also taking steps to explore the development of additional LNG export facilities at Sempra LNG & Midstream’s Port Arthur, Texas property and Sempra Mexico’s ECA regasification facility. We discuss these opportunities in “Item 7. MD&A – Factors Influencing Future Performance” and in “Item 1A. Risk Factors.”

Demand and Competition. Technological advances associated with shale gas and tight oil production have significantly reduced the need for North American LNG import facilities and increased interest in liquefaction and export opportunities.

At current forward gas prices, U.S. Gulf Coast liquefaction is among the most price competitive potential LNG supply in the world. Brownfield liquefaction is particularly price competitive, resulting from many factors, including:

- high levels of developed and undeveloped North American unconventional natural gas and tight oil resources relative to domestic consumption levels;
- increasing gas and oil drilling productivity and decreasing unit costs of gas production;
- low breakeven prices of marginal North American unconventional gas production;
- proximity to ample existing gas transmission pipeline and underground gas storage capacity; and
- existing LNG tankage and berths.

Global LNG competition may limit U.S. LNG exports, as international liquefaction projects attempt to match U.S. Gulf Coast LNG production costs and customer contractual rights such as volume and destination flexibility. It is expected that U.S. LNG exports will increase competition for current and future global natural gas demand, and thereby facilitate development of a global commodity market for natural gas and LNG.

Our LNG liquefaction business' major domestic and international competitors currently would include, among others, the following companies and their related LNG affiliates:

- Cheniere Energy
- Energy Transfer
- ExxonMobil
- Freeport LNG
- LNG Ltd
- Next Decade
- Pembina Resources
- Qatar Petroleum
- Royal Dutch Shell
- Steelhead LNG
- Tellurian Inc.
- Texas LNG
- Venture Global Partners
- Woodside Petroleum

Additionally, our Cameron LNG JV co-owners, affiliates of TOTAL S.A., Mitsubishi Corporation (through a related company jointly established with Nippon Yusen Kabushiki Kaisha) and Mitsui & Co., Ltd., compete globally to market and sell LNG to end users, including gas and electric utilities located in LNG importing countries around the world. By providing liquefaction services, Cameron LNG JV will compete indirectly with liquefaction projects currently operating and those under development in the global LNG market. In addition to the U.S., these competitors are located in the Middle East, Southeast Asia, Africa, South America, Australia and Europe.

Midstream

As of December 31, 2018, Sempra LNG & Midstream had 42 Bcf of operational working natural gas storage capacity, a development project and natural gas pipeline, as follows:

- Bay Gas is a facility located 40 miles north of Mobile, Alabama, that provides underground storage (20 Bcf of operational working natural gas storage capacity) and delivery of natural gas. Sempra LNG & Midstream owns approximately 91 percent of the facility.
- Mississippi Hub is an underground salt dome with 22 Bcf of operational working natural gas storage capacity located 45 miles southeast of Jackson, Mississippi.
- Liberty Gas Storage, LLC owns a 75.4-percent interest in LA Storage, a salt cavern development project in Cameron Parish, Louisiana, and ProLiance Transportation LLC owns the remaining 24.6 percent.
- Cameron Interstate Pipeline is a 36-mile natural gas pipeline in south Louisiana. The pipeline links the Cameron LNG terminal in Cameron Parish, Louisiana, to five interstate pipelines that connect to major markets in the Midwest, Northeast and Southeast U.S.

On February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners. Sempra LNG & Midstream received cash proceeds of \$328 million (subject to working capital adjustments and Sempra LNG & Midstream's purchase for \$20 million of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale). At closing, ArcLight Capital Partners owns 100-percent of Mississippi Hub and Bay Gas. Upon completion of the sale, Sempra LNG & Midstream has no operational working natural gas storage capacity.

Demand and Competition. Sempra LNG & Midstream's pipeline businesses compete with other regulated and unregulated pipelines. They compete primarily on the basis of price (in terms of transportation fees), available capacity and interconnections to downstream markets.

Marketing Operations

Sempra LNG & Midstream provides natural gas marketing, trading and risk management services through the utilization and optimization of contracted natural gas supply, transportation and storage capacity, as well as optimizing its assets in the short-term services market. Additionally, it sells electricity under short-term and long-term contracts and into the spot market and other competitive markets.

Sempra LNG & Midstream's marketing operations have an LNG purchase agreement with Tangguh PSC for the supply of the equivalent of 500 MMcf of natural gas per day from Tangguh PSC's Indonesian liquefaction facility with delivery to Sempra Mexico's ECA LNG receipt terminal at a price based on the SoCal Border index for natural gas. The LNG purchase agreement allows Tangguh PSC to divert deliveries to other global markets in exchange for cash differential payments to Sempra LNG & Midstream. Sempra LNG & Midstream also may enter into short-term supply agreements to purchase LNG to be received, stored and regasified at the terminal for sale to other parties.

In addition to LNG, if deliveries of LNG cargoes are not sufficient, Sempra LNG & Midstream is also contracted to sell natural gas to Sempra Mexico that allows Sempra Mexico to satisfy its obligation under supply agreements with the CFE and other customers and to supply the TdM power plant. These revenues are adjusted for indemnity payments and profit sharing, as discussed in “Sempra Mexico – Gas Business – LNG” above.

Sempra LNG & Midstream also has an EMA with Sempra Mexico to provide energy marketing, scheduling and other related services to Sempra Mexico’s TdM power plant to support its sales of generated power into the California electricity market. We discuss the EMA in “Sempra Mexico – Power Business – Natural Gas-Fired Generation” above.

Key Noncash Performance Indicators

Key noncash performance indicators at Sempra LNG & Midstream include natural gas sales volume, plant or facility availability and capacity utilization. Additional noncash performance indicators include goals related to safety, environmental considerations and regulatory compliance, and on-time and on-budget completion of development projects.

REGULATION

California State Utility Regulation

The California Utilities are principally regulated at the state level by the CPUC, the CEC and the CARB.

The CPUC:

- consists of five commissioners appointed by the Governor of California for staggered, six-year terms;
- regulates SDG&E’s and SoCalGas’ rates and conditions of service, sales of securities, rates of return, capital structure, rates of depreciation, and long-term resource procurement, except as described below in “U.S. Utility Regulation;”
- has jurisdiction over the proposed construction of major new electric generation, transmission and distribution, and natural gas storage, transmission and distribution facilities in California;
- conducts reviews and audits of utility performance and compliance with regulatory guidelines and conducts investigations into various matters, such as safety, deregulation, competition and the environment, to determine its future policies; and
- regulates the interactions and transactions of the California Utilities with Sempra Energy and its other affiliates.

The CPUC also oversees and regulates new products and services, including solar and wind energy, bioenergy, alternative energy storage and other forms of renewable energy. In addition, the CPUC’s safety and enforcement role includes inspections, investigations and penalty and citation processes for safety violations.

The CEC publishes electric demand forecasts for the state and for specific service territories. Based on these forecasts, the CEC:

- determines the need for additional energy sources and conservation programs;
- sponsors alternative-energy research and development projects;
- promotes energy conservation programs to reduce demand within the State of California for electricity and natural gas;
- maintains a statewide plan of action in case of energy shortages; and
- certifies power-plant sites and related facilities within the State of California.

The CEC conducts a 20-year forecast of available supplies and prices for every market sector that consumes natural gas in California. This forecast includes resource evaluation, pipeline capacity needs, natural gas demand and wellhead prices, and costs of transportation and distribution. This analysis is one of many resource materials used to support the California Utilities’ long-term investment decisions.

The State of California requires certain California electric retail sellers, including SDG&E, to deliver a percentage of their retail energy sales from renewable energy sources. The rules governing this requirement, administered by both the CPUC and the CEC, are generally known as the RPS Program. We discuss this requirement as it applies to SDG&E in “Item 7. MD&A – Factors Influencing Future Performance.”

California AB 32, the California Global Warming Solutions Act of 2006, assigns responsibility to CARB for monitoring and establishing policies for reducing GHG emissions. The bill requires CARB to develop and adopt a comprehensive plan for achieving real, quantifiable and cost-effective GHG emission reductions, including a statewide GHG emissions cap, mandatory reporting rules, and regulatory and market mechanisms to achieve reductions of GHG emissions. CARB is a department within the California Environmental Protection Agency, an organization that reports directly to the Governor’s Office in the Executive Branch of California State Government. Sempra LNG & Midstream and Sempra Mexico are also subject to the rules and regulations of CARB.

The operation and maintenance of SoCalGas' natural gas storage facilities are regulated by DOGGR, as well as various other state and local agencies.

Texas State Utility Regulation

Oncor's transmission and distribution rates are regulated by the PUCT and certain cities, and in certain limited instances, by the FERC. The PUCT has original jurisdiction over transmission and distribution rates and services in unincorporated areas and in those municipalities that have ceded original jurisdiction to the PUCT, and has exclusive appellate jurisdiction to review the rate and service orders and ordinances of municipalities. Generally, the Texas PURA prohibits the collection of any rates or charges by a public utility (as defined by PURA) that do not have the prior approval of the appropriate regulatory authority (i.e., the PUCT or the municipality with original jurisdiction).

At the state level, PURA requires owners or operators of transmission facilities to provide open-access wholesale transmission services to third parties at rates and terms that are nondiscriminatory and comparable to the rates and terms of the utility's own use of its system. The PUCT has adopted rules implementing the state open-access requirements for all utilities that are subject to the PUCT's jurisdiction over transmission services, including Oncor.

U.S. Utility Regulation

The California Utilities are also regulated at the federal level by the FERC, the NRC, the EPA, the DOE and the DOT.

The FERC regulates the California Utilities' interstate sale and transportation of natural gas and the application of the uniform systems of accounts. In the case of SDG&E, the FERC regulates the transmission and wholesale sales of electricity in interstate commerce, transmission access, rates of return on transmission investment, rates of depreciation and electric rates involving sales for resale. The Energy Policy Act governs procedures for requests for transmission service. The FERC approved the California IOUs' transfer of operation and control of their transmission facilities to the California ISO in 1998. Oncor operates within the ERCOT market, which we discuss below. Oncor's transmission revenues are provided under tariffs approved by either the PUCT or, to a small degree related to limited interconnections to other markets, the FERC.

The NRC oversees the licensing, construction, operation and decommissioning of nuclear facilities in the U.S., including SONGS, in which SDG&E owns a 20-percent interest and which has been permanently retired since 2013. NRC and various state regulations require extensive review of the safety, radiological and environmental aspects of these facilities. We provide further discussion of SONGS matters, including the closure and pending decommissioning of the facility, in Note 15 of the Notes to Consolidated Financial Statements.

The EPA implements federal laws to protect human health and the environment, including federal laws on air quality, water quality, wastewater discharge, solid waste management, and hazardous waste disposal and remediation. The EPA also sets national environmental standards that state and tribal governments implement through their own regulations. The California Utilities and Oncor are therefore subject to an interrelated framework of environmental laws and regulations.

The DOT, through PHMSA, has established regulations regarding engineering standards and operating procedures applicable to the California Utilities' natural gas transmission and distribution pipelines. The DOT has certified the CPUC to administer oversight and compliance with these regulations for the entities they regulate in California. The PHMSA also is in the process of promulgating regulations applicable to the California Utilities' natural gas storage facilities. See "Other U.S. Regulation" below.

ERCOT Market

Oncor operates within the ERCOT market, which represents approximately 90 percent of the electricity consumption in Texas. ERCOT is the regional reliability coordinating organization for member electricity systems in Texas and the ISO of the interconnected transmission grid for those systems. ERCOT is responsible for ensuring reliability, adequacy and security of the electric systems, as well as nondiscriminatory access to transmission service by all wholesale market participants in the ERCOT region. ERCOT's membership consists of corporate and associate members, including electric cooperatives, municipal power agencies, independent generators, independent power marketers, transmission service providers, distribution services providers, independent retail electric providers and consumers.

The ERCOT market operates under reliability standards set by the North American Electric Reliability Corporation. The PUCT has primary jurisdiction over the ERCOT market to ensure the adequacy and reliability of power supply across Texas' main interconnected transmission grid. Oncor, along with other owners of transmission and distribution facilities in Texas, assists the ERCOT ISO in its operations. Oncor has planning, design, construction, operation and maintenance responsibility for the portion of the transmission grid and for the load-serving substations it owns, primarily within its certificated distribution service area. Oncor participates with the ERCOT ISO and other ERCOT utilities in obtaining regulatory approvals and planning, designing,

constructing and upgrading transmission lines in order to remove existing constraints and interconnect generation on the ERCOT transmission grid. The transmission line projects are necessary to meet reliability needs, support energy production and increase bulk power transfer capability.

Oncor is subject to reliability standards adopted and enforced by the Texas Reliability Entity, Inc., an independent organization that develops reliability standards for the ERCOT region and monitors and enforces compliance with the North American Electric Reliability Corporation (including critical infrastructure protection) standards and ERCOT protocols.

Other State and Local Regulation Within the U.S.

The SCAQMD is the air pollution control agency responsible for regulating stationary sources of air pollution in the South Coast Air Basin in Southern California. The district's territory covers all of Orange County and the urban portions of Los Angeles, San Bernardino and Riverside counties.

SDG&E has electric franchises with the two counties and the 27 cities in or adjoining its electric service territory; and natural gas franchises with the one county and the 18 cities in its natural gas service territory. These franchises allow SDG&E to locate, operate and maintain facilities for the transmission and distribution of electricity and/or natural gas. Most of the franchises have indefinite lives with no expiration dates. Some natural gas and some electric franchises have fixed expiration dates that range from 2021 to 2035.

SoCalGas has natural gas franchises with the 12 counties and the 223 cities in its service territory. These franchises allow SoCalGas to locate, operate and maintain facilities for the transmission and distribution of natural gas. Most of the franchises have indefinite lives with no expiration date. Some franchises have fixed expiration dates, ranging from 2019 to 2062.

Other U.S. Regulation

The FERC regulates certain Sempra Renewables and Sempra LNG & Midstream assets pursuant to the Federal Power Act and Natural Gas Act, which provide for FERC jurisdiction over, among other things, sales of wholesale power in interstate commerce, transportation of natural gas in interstate commerce, and siting and permitting of LNG terminals. In addition, certain Sempra Renewables power generation assets are required under the Federal Power Act to comply with reliability standards developed by the North American Electric Reliability Corporation.

Sempra LNG & Midstream's investment in Cameron LNG JV is subject to regulations of the DOE regarding the export of LNG.

The FERC may regulate rates and terms of service based on a cost-of-service approach or, in geographic and product markets determined by the FERC to be sufficiently competitive, rates may be market-based. FERC-regulated rates at the following businesses are:

- Sempra Renewables and Sempra LNG & Midstream: market-based for wholesale electricity sales
- Sempra LNG & Midstream: cost-based for the transportation of natural gas
- Sempra LNG & Midstream: market-based for the purchase and sale of LNG and natural gas

The California Utilities, Sempra LNG & Midstream and businesses that Sempra LNG & Midstream invests in are subject to the DOT rules and regulations regarding pipeline safety. PHMSA, acting through the Office of Pipeline Safety, is responsible for administering the DOT's national regulatory program to assure the safe transportation of natural gas, petroleum and other hazardous materials by pipelines, including pipelines associated with natural gas storage, and develops regulations and other approaches to risk management to assure safety in design, construction, testing, operation, maintenance and emergency response of pipeline facilities. The California Utilities, Sempra LNG & Midstream, Sempra Renewables and Sempra Mexico are also subject to regulation by the U.S. Commodity Futures Trading Commission.

Foreign Regulation

Sempra South American Utilities has two utilities in South America that are subject to laws and regulations in the localities and countries in which they operate. These utilities serve primarily regulated customers, and their revenues are based on tariffs that are set by the CNE in Chile and the OSINERGMIN in Peru, as we discuss below in "Ratemaking Mechanisms – Sempra South American Utilities."

Operations and projects in our Sempra Mexico segment are subject to regulation by the CRE, the Mexican Safety, Energy and Environment Agency (Agencia de Seguridad, Energía y Ambiente), the Mexican Secretary of Energy (Secretaría de Energía) and other labor and environmental agencies of city, state and federal governments in Mexico.

Licenses and Permits

The California Utilities and Sempra Texas Utility obtain numerous permits, authorizations and licenses for the transmission and distribution of natural gas and electricity and the operation and construction of related assets, including electric generation and natural gas storage facilities, some of which may require periodic renewal.

Sempra South American Utilities and Sempra Mexico obtain numerous permits, authorizations and licenses for their electric and natural gas distribution, generation and transmission systems from the local governments where the service is provided. The respective energy ministries in Chile or Peru granted the concessions to operate Chilquinta Energía's and Luz del Sur's distribution operations for indefinite terms, not requiring renewal. The permits for generation, transportation, storage and distribution operations at Sempra Mexico are generally for 30-year terms, with options for renewal under certain regulatory conditions.

Sempra Mexico and Sempra LNG & Midstream obtain licenses and permits for the construction, operation and expansion of LNG facilities and for the import and export of LNG and natural gas. Sempra Mexico also obtains licenses and permits for the construction and operation of terminals for the receipt, storage and delivery of liquid fuels.

Sempra Renewables obtains permits, authorizations and licenses for the construction and operation of power generation facilities and for the wholesale distribution of electricity.

Sempra LNG & Midstream obtains permits, authorizations and licenses for the construction and operation of natural gas storage facilities and pipelines, and in connection with participation in the wholesale electricity market.

Most of the permits and licenses associated with construction and operations within the Sempra Renewables and Sempra LNG & Midstream businesses are for periods generally in alignment with the construction cycle or life of the asset and in many cases are greater than 20 years.

RATEMAKING MECHANISMS

California Utilities

General Rate Case Proceedings. A CPUC GRC proceeding is designed to set sufficient base rates to allow the California Utilities to recover their reasonable forecasted cost of O&M and to provide the opportunity to realize their authorized rates of return on their investment. The proceeding generally establishes the test year revenue requirements, which authorizes how much the California Utilities can collect from their customers, and provides for attrition, or annual increases in revenue requirements, for each year following the test year. The CPUC generally conducts a GRC every three years.

Cost of Capital Proceedings. A CPUC cost of capital proceeding determines a utility's authorized capital structure and authorized return on rate base, which is a weighted-average of the authorized returns on debt, preferred stock and common equity (referred to as return on equity or ROE), weighted on a basis consistent with the authorized capital structure. The authorized return on rate base approved by the CPUC is the rate that the California Utilities use to establish customer rates to recover costs incurred to finance investments in CPUC-regulated electric distribution and generation, as well as natural gas distribution and transmission assets.

A cost of capital proceeding also addresses the CCM, which applies market-based benchmarks to determine whether an adjustment to the authorized return on rate base is required during the interim years between cost of capital proceedings. The automatic CCM did not operate in 2018. The CCM will be reviewed in the next cost of capital proceeding scheduled to be filed in April 2019 for a January 1, 2020 implementation. The CCM, if renewed in the 2019 cost of capital proceeding in a form similar to its previous design, could automatically adjust ROE up or down based on the monthly Moody's utility bond index, beginning in 2021. SDG&E's and SoCalGas' current cost of capital will continue through 2019. Beginning in 2020, the conclusions authorized in the cost of capital proceeding could impact the cost of debt, including debt and ROE, capital structure and the CCM.

We also discuss the cost of capital and CCM in Note 4 of the Notes to Consolidated Financial Statements.

Transmission Rate Cases. SDG&E files separately with the FERC for its authorized ROE on FERC-regulated electric transmission operations and assets. The TO4 settlement agreement, approved by the FERC in May 2014 and in effect through December 31, 2018, established a 10.05 percent ROE. The settlement also established 1) a process whereby rates are determined using a base period of historical costs and a forecast of capital investments and 2) a true-up period similar to balancing account treatment that is designed to provide SDG&E earnings of no more and no less than its actual cost of service including its authorized return on investment. SDG&E makes annual information filings on December 1 of each year to update rates for the following calendar year.

SDG&E submitted its TO5 filing with the FERC in October 2018 with a proposed FERC ROE of 11.2 percent to be effective January 1, 2019. In December 2018, the FERC issued an order accepting the filing, suspending its implementation until June 1, 2019 subject to refund, and establishing hearing and settlement procedures, which we discuss in Note 4 of the Notes to Consolidated Financial Statements. SDG&E also has the right to file for any ROE incentives that might apply under FERC rules. SDG&E's debt-to-equity ratio will be set annually based on the actual ratio at the end of each year.

Incentive Mechanisms. The CPUC applies performance-based measures and incentive mechanisms to all California IOUs, under which the California Utilities have earnings potential above authorized CPUC base operating margin if they achieve or exceed specific performance and operating goals. Generally, for performance-based awards, if performance is above or below specific benchmarks, the utility is eligible for financial awards or subject to financial penalties.

SDG&E has incentive mechanisms associated with:

- operational incentives (electric reliability)
- energy efficiency

SoCalGas has incentive mechanisms associated with:

- energy efficiency
- natural gas procurement
- unbundled natural gas storage and system operator hub services

Other Cost-Based Recovery. The CPUC authorizes the California Utilities to collect additional revenue requirements to recover costs that they have been authorized to pass on to customers, including the costs to purchase electricity and natural gas and those associated with administering public purpose, demand response and customer energy efficiency programs. Actual costs are recovered as the commodity or service is delivered or, to the extent actual amounts vary from forecasts, generally recovered or refunded within a subsequent period based on the nature of the account. Overcollections and undercollections represent differences between cash collected in current rates and amounts due for specified components (including costs, depreciation and return on rate base) probable of recovery from ratepayers. The lagging aspect of overcollections and undercollections impacts cash flows until these respective amounts are tried up with collections from customers.

Because changes in SDG&E's and SoCalGas' cost of electricity and/or natural gas is substantially recovered in rates through a balancing account mechanism, changes in these costs are offset in revenues, and therefore do not impact earnings.

We also discuss regulatory matters in Note 4 of the Notes to Consolidated Financial Statements.

Sempra Texas Utility

Rates and Cost Recovery. Oncor's rates are regulated by the PUCT and certain cities and are subject to regulatory rate-setting processes and annual earnings oversight. This regulatory treatment does not provide any assurance as to achievement of earnings levels. Oncor's rates are regulated based on an analysis of its costs and capital structure, as reviewed and approved in a regulatory proceeding. Rate regulation is premised on the full recovery of prudently incurred costs and a reasonable rate of return on invested capital. However, there is no assurance that the PUCT will judge all of Oncor's costs to have been prudently incurred, that the PUCT will not reduce the amount of invested capital included in the capital structure that Oncor's rates are based upon, that the regulatory process in which rates are determined will always result in rates that produce full recovery of Oncor's costs or that Oncor's authorized ROE will not be reduced.

The PURA allows utilities to file, under certain circumstances, once per year and up to four rate adjustments between comprehensive base rate proceedings to recover distribution-related investments on an interim basis. PUCT substantive rules also allow Oncor to update its transmission rates periodically to reflect changes in invested capital. These "capital tracker" provisions encourage investment in the electric system to help ensure reliability and efficiency by allowing for timely recovery of and return on new investments.

Capital Structure and Return on Equity. In October 2017, the PUCT approved new rates in Oncor's 2017 rate review that took effect on November 27, 2017. Oncor's PUCT-authorized ROE is 9.8 percent and its authorized regulatory capital structure is 57.5 percent debt to 42.5 percent equity.

Sempra South American Utilities

Chilquinta Energía and Luz del Sur, our electric distribution utilities in South America, recognize revenues based on tariffs that are set by government agencies in their respective countries based on an efficient model distribution company defined by those agencies. The tariffs are based on a model and are intended to cover the costs of the model company. Because the tariffs are not

based on the costs of the specific utility, they may not result in full cost recovery. The tariffs are designed to provide for a pass-through to customers of transmission and energy charges, recovery of reasonable operating and administrative costs, incentives to reduce costs and make needed capital investments and a regulated rate of return on the distributor's regulated asset base.

Chilquinta Energía's revenues are based on tariffs that are set by the CNE. The CNE's review process for authorized distribution and transmission rates generally remains in effect for a period of four years. The CNE reviews rates for four-year periods related to distribution and transmission separately on an alternating basis every two years.

Luz del Sur's revenues are based on tariffs that are set by the OSINERGMIN. The components of tariffs for Luz del Sur are reviewed and adjusted every four years.

We discuss recent rate reviews for Chilquinta Energía and Luz del Sur in Note 4 of the Notes to Consolidated Financial Statements.

Sempra Mexico

Ecogas' revenues are derived from service and distribution fees charged to its customers in pesos. The price Ecogas pays to purchase natural gas, which is based on international price indices, is passed through directly to its customers. The service and distribution fees charged by Ecogas are regulated by the CRE, which performs a review of rates every five years and monitors prices charged to end-users. The tariffs operate under a return-on-asset-base model. In the annual tariff adjustment, rates are adjusted to account for inflation or fluctuations in exchange rates, and inflation indexing includes separate U.S. and Mexican cost components so that U.S. costs can be included in the final distribution rates.

ENVIRONMENTAL MATTERS

We discuss environmental issues affecting us in Note 16 of the Notes to Consolidated Financial Statements and "Item 1A. Risk Factors." You should read the following additional information in conjunction with those discussions.

Hazardous Substances

The CPUC's Hazardous Waste Collaborative mechanism allows California's IOUs to recover hazardous waste cleanup costs for certain sites, including those related to certain Superfund sites. This mechanism permits the California Utilities to recover in rates 90 percent of hazardous waste cleanup costs and related third-party litigation costs, and 70 percent of the related insurance-litigation expenses. In addition, the California Utilities have the opportunity to retain a percentage of any recoveries from insurance carriers and other third parties to offset the cleanup and associated litigation costs not recovered in rates.

We record estimated liabilities for environmental remediation when amounts are probable and estimable. In addition, we record amounts authorized to be recovered in rates under the Hazardous Waste Collaborative mechanism as regulatory assets.

Air and Water Quality

The electric and natural gas industries are subject to increasingly stringent air quality and GHG standards, such as those established by the CARB and SCAQMD. The California Utilities generally recover in rates the costs to comply with these standards. We discuss GHG standards and credits further in Note 1 of the Notes to Consolidated Financial Statements.

We discuss environmental matters concerning SoCalGas' Aliso Canyon natural gas storage facility in Note 16 of the Notes to Consolidated Financial Statements, in "Item 7. MD&A – Factors Influencing Future Performance" and in "Item 1A. Risk Factors."

OTHER MATTERS

Executive Officers of the Registrants

EXECUTIVE OFFICERS OF SEMPRA ENERGY			
Name	Age ⁽¹⁾	Positions held over last five years	Time in position
Jeffrey W. Martin	57	Chairman	December 2018 to present
		Chief Executive Officer	May 2018 to present
		Executive Vice President and Chief Financial Officer	January 2017 to April 2018
		Chairman, SDG&E	November 2015 to December 2016
		President, SDG&E	October 2015 to December 2016
		Chief Executive Officer, SDG&E	January 2014 to December 2016
Joseph A. Householder	63	President and Chief Operating Officer	May 2018 to present
		Corporate Group President - Infrastructure Businesses	January 2017 to April 2018
		Executive Vice President and Chief Financial Officer	October 2011 to December 2016
Martha B. Wyrsh ⁽²⁾	61	Executive Vice President and General Counsel	September 2013 to present
Dennis V. Arriola	58	Executive Vice President and Group President	October 2018 to present
		Chief Strategy Officer and Executive Vice President of External Affairs and South America	April 2018 to September 2018
		Executive Vice President - Corporate Strategy and External Affairs	January 2017 to April 2018
		Chairman, SoCalGas	November 2015 to December 2016
		Chief Executive Officer, SoCalGas	March 2014 to December 2016
		President, SoCalGas	August 2012 to September 2016
Trevor I. Mihalik	52	Executive Vice President and Chief Financial Officer	May 2018 to present
		Senior Vice President	December 2013 to April 2018
		Controller and Chief Accounting Officer	July 2012 to April 2018
G. Joyce Rowland	64	Senior Vice President and Chief Culture Officer	August 2018 to present
		Senior Vice President, Chief Human Resources Officer and Chief Administrative Officer	September 2014 to August 2018
		Senior Vice President - Human Resources, Diversity and Inclusion	May 2010 to September 2014
Peter R. Wall	47	Vice President, Controller and Chief Accounting Officer	May 2018 to present
		Vice President and Chief Financial Officer, Sempra Infrastructure	January 2017 to April 2018
		Vice President and Chief Financial Officer, Sempra U.S. Gas & Power	March 2015 to December 2016
		Assistant Controller	October 2012 to March 2015

⁽¹⁾ Ages are as of February 26, 2019.

⁽²⁾ Ms. Wyrsh will retire as of March 1, 2019.

EXECUTIVE OFFICERS OF SDG&E

Name	Age ⁽¹⁾	Positions held over last five years	Time in position
Kevin C. Sagara	57	Chairman and Chief Executive Officer President, Sempra Renewables	September 2018 to present October 2013 to September 2018
Scott D. Drury	53	President Chief Energy Supply Officer Vice President - Human Resources, Diversity and Inclusion	January 2017 to present June 2015 to December 2016 March 2011 to June 2015
Caroline A. Winn	55	Chief Operating Officer Chief Energy Delivery Officer Vice President - Customer Services	January 2017 to present June 2015 to December 2016 April 2010 to June 2015
Bruce A. Folkmann	51	Vice President, Controller, Chief Financial Officer, Chief Accounting Officer and Treasurer Vice President and Chief Financial Officer, Sempra U.S. Gas & Power	March 2015 to present July 2013 to March 2015
P. Kevin Chase	50	Senior Vice President, Chief Information Officer and Chief Digital Officer Chief Information Officer, Sempra Energy Chief Information Officer and Senior Vice President of Technology and Supply Chain, Energy Future Holdings	June 2018 to present March 2017 to June 2018 June 2011 to October 2016
Randall L. Clark	49	Chief Human Resources Officer and Chief Administrative Officer Vice President - Human Resources, Diversity and Inclusion Vice President - Human Resources Services, Sempra Energy Vice President - Compliance and Governance, Sempra Energy	March 2017 to present October 2015 to March 2017 September 2014 to October 2015 January 2014 to September 2014
Diana L. Day	54	Vice President and General Counsel Acting General Counsel Vice President of Enterprise Risk Management and Compliance, SoCalGas and SDG&E Associate General Counsel	January 2019 to present September 2017 to January 2019 June 2014 to January 2019 January 2014 to June 2014

⁽¹⁾ Ages are as of February 26, 2019.

EXECUTIVE OFFICERS OF SOCALGAS

Name	Age ⁽¹⁾	Positions held over last five years	Time in position
J. Bret Lane	59	Chief Executive Officer President Chief Operating Officer Principal Executive Officer	December 2018 to present September 2016 to present January 2014 to December 2018 November 2018 to December 2018
Jimmie I. Cho	54	Chief Operating Officer Senior Vice President of Customer Services and Gas Distribution Operations Senior Vice President of Gas Distribution Operations, SDG&E Senior Vice President of Gas Engineering and Distribution Operations, SoCalGas and SDG&E Senior Vice President of Gas Operations and System Integrity, SoCalGas and SDG&E Vice President of Gas Operations, SoCalGas and SDG&E	January 2019 to present April 2018 to January 2019 April 2018 to January 2019 October 2017 to April 2018 June 2014 to October 2017 January 2012 to June 2014
Bruce A. Folkmann	51	Vice President, Controller, Chief Financial Officer, Chief Accounting Officer and Treasurer Vice President and Chief Financial Officer, Sempra U.S. Gas & Power	March 2015 to present July 2013 to March 2015
P. Kevin Chase	50	Senior Vice President, Chief Information Officer and Chief Digital Officer Chief Information Officer, Sempra Energy Chief Information Officer and Senior Vice President of Technology and Supply Chain, Energy Future Holdings	June 2018 to present March 2017 to June 2018 June 2011 to October 2016
Gillian A. Wright	49	Chief Human Resources Officer and Chief Administrative Officer Vice President of Customer Services	April 2018 to present January 2014 to April 2018
David J. Barrett	54	Vice President and General Counsel Associate General Counsel of Gas Infrastructure, Sempra Energy Assistant General Counsel of Gas Infrastructure, Sempra Energy Assistant General Counsel of Real Estate and Environmental, SDG&E	January 2019 to present June 2018 to January 2019 February 2017 to June 2018 October 2010 to February 2017

⁽¹⁾ Ages are as of February 26, 2019.

Employees of the Registrants

The table below shows the number of employees for each of our registrants at December 31, 2018. Employees represented by labor unions are covered under various collective bargaining agreements that generally cover wages, benefits, working conditions and other terms and conditions of employment.

NUMBER OF EMPLOYEES

	Number of employees	% of employees covered under collective bargaining agreements	% of employees covered under collective bargaining agreements expiring within one year
Sempra Energy Consolidated ⁽¹⁾	16,823	41%	2%
SDG&E ⁽¹⁾	4,113	29%	—%
SoCalGas	7,523	60%	—%

⁽¹⁾ Excludes employees of equity method investees and VIEs as defined by U.S. GAAP.

COMPANY WEBSITES

Company website addresses are

- Sempra Energy – www.sempra.com
- SDG&E – www.sdge.com
- SoCalGas – www.socalgas.com

We make available free of charge on the Sempra Energy website, and for SDG&E and SoCalGas, via a hyperlink on their websites, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The charters of the audit, compensation and corporate governance committees of the Sempra Energy board of directors, Sempra Energy's corporate governance guidelines, and Sempra Energy's code of business conduct and ethics for directors and officers (which also applies to directors and officers of SDG&E and SoCalGas) are posted on Sempra Energy's website.

Printed copies of these materials may be obtained by writing to our Corporate Secretary at Sempra Energy, 488 8th Avenue, San Diego, CA 92101-7123.

The SEC also maintains a website that contains reports, proxy and information statements and other information we file with the SEC at www.sec.gov.

The information on the websites of Sempra Energy, SDG&E and SoCalGas is not part of this report or any other report that we file with or furnish to the SEC and is not incorporated herein by reference.

ITEM 1A. RISK FACTORS

When evaluating our company and its subsidiaries, you should consider carefully the following risk factors and all other information contained in this report. These risk factors could materially adversely affect our actual results and cause such results to differ materially from those expressed in any forward-looking statements made by us or on our behalf. We may also be materially harmed by risks and uncertainties not currently known to us or that we currently deem to be immaterial. If any of the following occurs, our businesses, cash flows, results of operations, financial condition and/or prospects could be materially adversely affected. In addition, the trading prices of our securities and those of our subsidiaries could substantially decline due to the occurrence of any of these risks. These risk factors should be read in conjunction with the other detailed information concerning our company set forth in, or attached as an exhibit to, this annual report on Form 10-K, including, without limitation, the information set forth in the Notes to Consolidated Financial Statements and in "Item 7. MD&A." In this section, when we state that a risk or uncertainty may, could or will have a "material adverse effect" on us, or may, could or will "materially adversely affect" us, we mean that the risk or uncertainty may, could or will, as the case may be, have a material adverse effect on our businesses, cash flows, results of operations, financial condition, prospects and/or the trading prices of our securities or those of our subsidiaries.

Risks Related to Sempra Energy

Sempra Energy's cash flows, ability to pay dividends and ability to meet its debt obligations largely depend on the performance of its subsidiaries and entities that are accounted for as equity method investments, such as Oncor Holdings, and the ability to utilize the cash flows from those subsidiaries and equity method investments.

We are a holding company and substantially all our assets are owned by our subsidiaries and in entities accounted for as equity method investments, such as Oncor Holdings. Our ability to pay dividends and to meet our debt and other obligations depends almost entirely on cash flows from our subsidiaries and JVs and other entities in which we have invested and, in the short term, our ability to raise capital from external sources. In the long term, cash flows from our subsidiaries and other entities in which we have invested depend on their ability to generate operating cash flows in excess of their own expenditures, common and preferred stock dividends, and debt or other obligations. In addition, the subsidiaries and other entities accounted for as equity method investments are separate and distinct legal entities that are not obligated to pay dividends or make loans or distributions to us, whether to enable us to pay principal and interest on our debt securities, our other obligations or dividends on our common stock or our preferred stock, and could be precluded from paying any such dividends or making any such loans or distributions under certain circumstances, including, without limitation, as a result of legislation, regulation, court order, contractual restrictions or in times of financial distress. The inability to access capital from our subsidiaries and entities accounted for as equity method investments as well from the capital markets could have a material adverse effect on our cash flows and financial condition.

Certain credit rating agencies may downgrade our credit ratings or place those ratings on negative outlook.

Credit rating agencies routinely evaluate Sempra Energy, SDG&E and SoCalGas, and their long-term and short-term debt ratings are based on a number of factors, including the perceived supportiveness of the regulatory environment affecting utility operations, ability to generate cash flows, level of indebtedness, overall financial strength and the status of certain capital projects, as well as factors beyond our control, such as tax reform, the state of the economy and our industry generally.

Moody's, S&P and Fitch Ratings have increasingly focused on the increased risk of wildfires in California, the current California regulatory environment and the doctrine of inverse condemnation, which under California law imposes strict liability on a utility whose equipment is determined to be a cause of a fire (meaning that the utility may be found liable regardless of fault). In 2018, and primarily as a result of their position on the increased risk of wildfires in California and the current California regulatory environment, each of Moody's, S&P and Fitch Ratings downgraded SDG&E's issuer rating, senior secured and senior unsecured credit ratings. On January 21, 2019, S&P downgraded SDG&E's issuer credit rating to BBB+ from A- while maintaining its negative outlook. On January 22, 2019, Fitch Ratings affirmed SDG&E's long-term issuer default rating at A- but revised the rating outlook to negative from stable. On January 24, 2019, Moody's placed SDG&E under review for downgrade. The ratings actions in January 2019 were primarily the result of recent wildfires in California in counties outside of the California Utilities' electric service territory and the possible inability to recover costs and expenses in cases where California IOUs, like the California Utilities, are determined to have had their equipment be the cause of a fire. While SDG&E's credit ratings are investment grade, each of the credit rating agencies reviews its rating periodically, and there is no assurance that SDG&E's current credit ratings and ratings outlooks will remain the same or that SDG&E's credit ratings will not be further downgraded.

Also, in 2018, each of Moody's, S&P and Fitch Ratings affirmed credit ratings of Sempra Energy, and SoCalGas, with Moody's and S&P changing Sempra Energy's outlook to negative, and S&P changing SoCalGas' outlook to negative.

For Sempra Energy, the credit rating agencies noted that the following, among other things, could lead to negative ratings actions:

- further weakening of SDG&E's business risk profile reflecting persistent California wildfires or if there is little meaningful progress in addressing inverse condemnation via changes in legislation and/or regulation in California that significantly reduces the exposure of electric utilities to strict liability in connection with wildfires;
- if Sempra Energy fails to show a gradual improvement in certain of its financial metrics or does not address upcoming holding company debt maturities;
- if Cameron LNG JV experiences cost overruns or delays requiring a substantially higher amount of equity injection from Sempra Energy than the credit rating agencies have estimated, or if the project is highly likely to be delayed beyond the long-stop completion date in September 2021 with low likelihood of extension or is terminated, making the exercise of the completion guarantee highly probable; and/or
- a downgrade at the California Utilities.

For SoCalGas, the credit rating agencies noted that the following, among others, could lead to a negative ratings action:

- a deterioration in the utility's relationship with the CPUC and/or the credit supportiveness of the California regulatory environment;
- a weakening to SDG&E's business risk profile reflecting continued and persistent California wildfires without a longer term reform to inverse condemnation; and/or
- the 2019 GRC results in inadequate relief or higher leverage that weakens SoCalGas' credit metrics on a sustained basis.

While Sempra Energy's and SoCalGas' credit ratings are investment grade, each of the credit rating agencies reviews their ratings periodically, and there is no assurance that Sempra Energy's and SoCalGas' current credit ratings and ratings outlooks will remain the same or that Sempra Energy's and/or SoCalGas' credit ratings will not be downgraded.

A downgrade of Sempra Energy's or any of its subsidiaries' credit ratings or rating outlooks may result in a requirement for collateral to be posted in the case of certain financing arrangements and may materially and adversely affect the market prices of their equity and debt securities, the rates at which borrowings are made and commercial paper is issued, and the various fees on their outstanding credit facilities. This could make it significantly more costly for Sempra Energy, SDG&E, SoCalGas and Sempra Energy's other subsidiaries to issue debt securities, to borrow under credit facilities and to raise certain other types of capital and/or complete additional financings. Such amounts could materially and adversely affect our cash flows, results of operations and financial condition.

Conditions in the financial markets and economic conditions generally may materially adversely affect us.

Our businesses are capital intensive and we rely significantly on long-term debt to fund a portion of our capital expenditures and repay outstanding debt, and on short-term borrowings to fund a portion of day-to-day business operations.

Limitations on the availability of credit and increases in interest rates or credit spreads may materially adversely affect our businesses, cash flows, results of operations, financial condition and/or prospects, as well as our ability to meet contractual and other commitments. In difficult credit market environments, we may find it necessary to fund our operations and capital expenditures at a higher cost or we may be unable to raise as much funding as we need to support new or ongoing business activities. This could cause us to reduce non-safety related capital expenditures and could increase our cost of servicing debt, both of which could significantly reduce our short-term and long-term profitability.

In addition, our variable rate indebtedness and credit facilities may incorporate LIBOR as a benchmark for establishing certain rates. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to disappear entirely or to perform differently than in the past. The consequences of these developments cannot be entirely predicted, but could include an increase in the cost of our variable rate indebtedness and/or borrowings, and could impact the applicability of our cash flow hedges.

Other factors can affect the availability and cost of credit for our businesses as well as the terms of equity and debt financing, including:

- changes or lack of changes to the regulatory environment in the State of California that may negatively affect energy companies generally, or the California Utilities in particular;
- the failure of the State of California to adequately address the financial and operational risks posed by the increased incidents of wildfires and by inverse condemnation;
- the overall health of the energy industry;
- volatility in electricity or natural gas prices;
- an increase in interest rates by the Federal Reserve Bank;
- credit ratings downgrades; and
- general economic and financial market conditions.

In addition, over the past two years, California IOUs have suffered from the potential catastrophic losses resulting from the impact of the multiple wildfires that spread through Northern and Southern California (the “California Wildfires”). While the California Wildfires occurred in counties outside of the California Utilities’ electric service territory, the uncertainty about the outcomes of these matters and the possibility of catastrophic wildfires in the future have negatively impacted confidence in California IOUs generally, which could materially and adversely impact Sempra Energy’s and the California Utilities’ ability to access the capital markets at rates that we believe are commercially reasonable.

Sempra Energy has substantial investments in Mexico and South America which expose us to foreign currency, inflation, legal, tax, economic, geo-political and management oversight risk.

We have significant foreign operations in Mexico and South America. Our foreign operations pose complex management, foreign currency, inflation, legal, tax and economic risks. Certain of these risks differ from and potentially may be greater than those associated with our domestic businesses. All our international businesses are sensitive to geo-political uncertainties and our non-utility international businesses are sensitive to changes in the priorities and budgets of international customers, all of which may be driven by changes in their environments and potentially volatile worldwide economic conditions, and various regional and local economic and political factors, risks and uncertainties, as well as U.S. foreign policy. Foreign currency exchange and inflation rates and fluctuations in those rates may have an impact on our revenue, costs or cash flows from our international operations, which could materially adversely affect our financial performance. Our currency exposures are to the Mexican, Peruvian and Chilean currencies. Our Mexican subsidiaries have U.S. dollar-denominated monetary assets and liabilities that give rise to Mexican currency exchange rate movements for Mexican income tax purposes. They also have deferred income tax assets and liabilities, which are significant, denominated in the Mexican peso that must be translated to U.S. dollars for financial reporting purposes. In addition, monetary assets and liabilities and certain nonmonetary assets and liabilities are adjusted for Mexican inflation for Mexican income tax purposes. Our primary objective when we attempt to reduce foreign currency risk is to preserve the economic value of our foreign investments and to reduce earnings volatility that would otherwise occur due to exchange rate fluctuations. We may attempt to hedge material cross-currency transactions and earnings exposure through various means, including financial instruments and short-term investments. We generally do not hedge our deferred income tax assets and liabilities. Because we do not hedge our net investments in foreign countries, we are susceptible to volatility in OCI caused by exchange rate fluctuations, primarily related to our South American subsidiaries, whose functional currencies are not the U.S. dollar. We discuss our foreign currency exposure at our Mexican subsidiaries in “Item 7. MD&A” and “Item 7A. Quantitative and Qualitative Disclosures About Market Risk.”

The current U.S. administration has called for substantial changes to trade agreements, such as NAFTA, and U.S. immigration policy by reviewing various options, including tariffs, for funding new Mexico-U.S. border security infrastructure. For example,

in November 2018, President Trump signed the USMCA, which, if approved by the legislatures of the U.S., Mexico and Canada, would replace NAFTA. Such actions could result in changes in the Mexican, U.S. and other markets that could materially adversely affect our business, financial condition, results of operations, cash flows or prospects. In addition, if NAFTA is replaced or the U.S. withdraws from the agreement, the Mexican government could implement retaliatory actions, such as the imposition of restrictions or import fees on Mexican imports of natural gas from the U.S. or imports and exports of electricity to and from the U.S. Any of these actions by either or both governments could adversely affect imports and exports between Mexico and the U.S. and negatively impact the U.S. and Mexican economies and the companies with whom we conduct business in Mexico, which could materially adversely affect our business, financial condition, results of operations, cash flows, or prospects.

We may be unable to realize the anticipated benefits from our plan to divest certain of our assets as part of our capital rotation plan, our North American business strategy or our cost reduction efforts and our profitability may be hurt or our business otherwise might be adversely affected.

In June 2018, we announced that our board of directors approved a plan to divest all our U.S. solar and wind assets and certain non-utility natural gas storage assets in the southeast U.S. (collectively, the Non-Utility U.S. Assets). Additionally, in January 2019, we announced that our board of directors approved a plan to sell our South American businesses. While we have completed the sale of a substantial portion of the Non-Utility U.S. Assets and expect to complete the sale of the remaining Non-Utility U.S. Assets in the second quarter of 2019, the pending sale will depend on the satisfaction or waiver of certain closing conditions. While we expect to complete the sale of our South American businesses by the end of 2019, the planned sale will depend on several factors that may be beyond our control, including, but not limited to, market conditions, industry trends, consent rights or other rights granted to or held by third parties and the availability of financing to potential buyers on reasonable terms. Further, there can be no assurance that the completed sales, or the pending and planned sales, if completed, will result in additional value to our shareholders, or that we will be able to redeploy any capital that we obtain from such sales in a way that would result in additional value to our shareholders.

If we do not successfully manage our current capital rotation plan, our North American business strategy or our cost reduction efforts, or any other such activities that we may initiate in the future, any expected efficiencies and benefits might be delayed or not realized, and our operations and business could be disrupted.

Our business could be negatively affected as a result of actions of activist shareholders.

While we strive to maintain constructive, ongoing communications with all our shareholders, and welcome their views and opinions with the goal of enhancing value for all our shareholders, activist shareholders may, from time to time, engage in proxy solicitations or advance shareholder proposals, or otherwise attempt to effect changes and assert influence on our board of directors and management. Responding to proposals by activist shareholders, including in connection with a proxy contest instituted by shareholders, would require us to incur significant legal and advisory fees, proxy solicitation expenses (in the case of a proxy contest) and administrative and associated costs and require significant time and attention by our board of directors and management, diverting their attention from the pursuit of our business strategy. For example, on June 11, 2018, Elliott Associates, L.P. and Elliott International, L.P. (collectively, Elliott) and Bluescape Resources Company LLC (Bluescape), collectively holders of an approximately 4.9-percent economic interest in our outstanding common stock as of such date, delivered a letter and accompanying presentation to our board of directors seeking collaboration with them and management to nominate six new directors identified by Elliott and Bluescape and establish a committee of the board of directors to conduct portfolio and operational reviews of our business. On September 18, 2018, we announced that we entered into a cooperation agreement with Elliott, Bluescape and Cove Key Management, LP. Under the cooperation agreement, each party has agreed to certain customary standstill restrictions until December 31, 2019, which is subject to extension until September 30, 2020 under certain circumstances. There can be no assurance that the cooperation agreement will be extended and any failure to secure an extension or a termination of the agreement without a resolution could negatively impact the market price of our common stock, preferred stock and other securities. In addition, upon termination of the cooperation agreement, Elliott, Bluescape and/or Cove Key Management, LP may, among other things, attempt to effect additional significant changes and assert influence on our board of directors and management, which may disrupt our operations by requiring significant time and attention by management and our board of directors. We discuss the cooperation agreement in “MD&A - Factors Influencing Future Performance.”

Any perceived uncertainties as to our future direction and control, our ability to execute on our strategy, or changes to the composition of our board of directors or senior management team arising from proposals by activist shareholders or a proxy contest could lead to the perception of a change in the direction of our business or instability that may be exploited by our competitors and/or other activist shareholders, result in the loss of potential business opportunities, and make it more difficult to pursue our strategic initiatives or attract and retain qualified personnel and business partners, any of which could have an adverse effect, which may be material, on our business and operating results. We may choose to initiate, or may become subject to,

litigation as a result of proposals by activist shareholders or proxy contests or matters relating thereto, which would serve as a further distraction to our board of directors and management and could require us to incur significant additional costs.

Actions such as those described above could cause significant fluctuations in the trading prices of our common stock and our preferred stock, based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

The TCJA may materially adversely affect our financial condition, results of operations and cash flows, the value of investments in our common stock, preferred stock and debt securities.

The TCJA significantly changed the IRC, including taxation of U.S. corporations by, among other things, reducing the U.S. corporate income tax rate, altering the expensing of capital expenditures, limiting interest deductions, adopting elements of a territorial tax system, assessing a one-time deemed repatriation tax on cumulative undistributed earnings of U.S.-owned foreign entities at the time of enactment and introducing certain anti-base erosion provisions. Certain aspects of the legislation are subject to interpretation and will require implementing regulations by the U.S. Department of the Treasury, as well as state tax authorities. The legislation could be subject to potential amendments and technical corrections, any of which could lessen or increase certain adverse impacts. In addition, the regulatory treatment of the impacts of this legislation will be subject to the discretion of the FERC and state public utility commissions.

Although it is unclear when or how capital markets, the FERC or state public utility commissions may respond to the TCJA, we do expect that certain financial metrics used by credit rating agencies, such as our funds from operations-to-debt percentage, will be negatively impacted as a result of an anticipated decrease in required income tax reimbursement payments to us from our domestic utility subsidiaries due to the decrease in the U.S. statutory corporate income tax rate. Certain provisions of the TCJA, such as 100-percent expensing of capital expenditures and impacts on utilization of our NOLs, may influence how we fund capital expenditures, the timing of capital expenditures and possible redeployment of capital through sales or monetization of assets, the timing of repatriation of foreign earnings and the use of equity financing to reduce our future use of debt, although there can be no assurance that these strategies will reduce any potential adverse impact from these provisions of the TCJA. In addition, although we are not currently expecting the deductibility of our interest costs to affect future earnings based on our method of allocation across our businesses, the interest deduction limitation under the TCJA is subject to potential additional guidance or interpretation from the U.S. Department of the Treasury, and there can be no assurance that any such additional guidance will not impact our current assessment.

It is also uncertain whether additional avenues will evolve for companies to manage the adverse aspects of this legislation. We believe that these strategies, to the extent available and if successfully applied, could lessen any such negative impacts on us, although there can be no assurance in this regard. In addition, adoption of the TCJA by state tax authorities, additional interpretations, regulations, amendments or technical corrections could have a material adverse effect on our financial condition, results of operations and cash flows and on the value of investments in our common stock, preferred stock and debt securities.

We discuss the effects of the TCJA further in Note 8 of the Notes to Consolidated Financial Statements and in “Item 7. MD&A – Results of Operations.”

Risks Related to All Sempra Energy Businesses

Severe weather conditions, natural disasters, accidents, equipment failures, explosions or acts of terrorism could materially adversely affect our businesses, financial condition, results of operations, cash flows and/or prospects.

Like other major industrial facilities, ours may be damaged by severe weather conditions, natural disasters such as fires, earthquakes, tornadoes, hurricanes, tsunamis, floods, mudslides, accidents, equipment failures, explosions or acts of terrorism. Because we are in the business of using, storing, transporting and disposing of highly flammable and explosive materials, as well as radioactive materials, and operating highly energized equipment, the risks such incidents may pose to our facilities and infrastructure, as well as the risks to the surrounding communities, are substantially greater than the risks such incidents may pose to a typical business. The facilities and infrastructure that we own or in which we have interests that may be subject to such incidents include, but are not limited to:

- natural gas, propane and ethane pipelines, storage and compressor facilities;
- electric transmission and distribution;
- power generation plants, including renewable energy and natural gas-fired generation;
- marine and inland ethane and liquid fuels, LNG and LPG terminals and storage; and

- nuclear power facilities, nuclear fuel and nuclear waste storage facilities (through our 20-percent minority interest in SONGS, which is currently being decommissioned).

Such incidents could result in severe business disruptions, prolonged power outages, property damage, injuries or loss of life, significant decreases in revenues and earnings, and/or significant additional costs to us. Such incidents that do not directly affect our facilities may impact our business partners, supply chains and transportation, which could negatively impact construction projects and our ability to provide natural gas and electricity to our customers. Any such incident could have a material adverse effect on our businesses, financial condition, results of operations, cash flows and/or prospects.

Depending on the nature and location of the facilities and infrastructure affected, any such incident also could cause catastrophic fires; natural gas, natural gas odorant, propane or ethane leaks; releases of other GHG; radioactive releases; explosions, spills or other significant damage to natural resources or property belonging to third parties; personal injuries, health impacts or fatalities; or present a nuisance to impacted communities. Any of these consequences could lead to significant claims against us. In some cases, we may be liable for damages even though we are not at fault, such as in cases where the doctrine of inverse condemnation applies. We discuss how the application of this doctrine in California imposes strict liability on a utility whose equipment is determined to be a cause of a fire (meaning the utility may be found liable regardless of fault) in “Item 7. MD&A – Factors Influencing Future Performance,” in Note 16 of the Notes to Consolidated Financial Statements and below under “Risks Related to the California Utilities – Insurance coverage for future wildfires may be unobtainable, prohibitively expensive, or insufficient to cover losses we may incur, and we may be unable to recover costs in excess of insurance through regulatory mechanisms.” Insurance coverage may significantly increase in cost or become prohibitively expensive, may be disputed by the insurers, or may become unavailable for certain of these risks or at sufficient levels, and any insurance proceeds we receive may be insufficient to cover our losses or liabilities due to the existence of limitations, exclusions, high deductibles, failure to comply with procedural requirements, and other factors, which could materially adversely affect our businesses, financial condition, results of operations, cash flows and/or prospects, as well as the trading prices of our common stock, preferred stock and debt securities.

Our businesses are subject to complex government regulations and tax requirements and may be materially adversely affected by changes in these regulations or requirements or in their interpretation or implementation.

In recent years, the regulatory environment that applies to the electric power and natural gas industries has undergone significant changes on the federal, state and local levels. These changes have affected the nature of these industries and the manner in which their participants conduct their businesses. These changes are ongoing, and we cannot predict the future course of changes in this regulatory environment or the ultimate effect that this changing regulatory environment will have on our businesses. Moreover, existing regulations, laws and tariffs may be revised or reinterpreted, and new regulations, laws and tariffs may be adopted or become applicable to us and our facilities. Special tariffs may also be imposed on components used in our businesses that could increase costs.

Our businesses are subject to increasingly complex accounting and tax requirements, and the regulations, laws and tariffs that affect us may change in response to economic or political conditions. Compliance with these requirements could increase our operating costs. Any new tax legislation, regulations or other interpretations in the U.S. and other countries in which we operate could materially adversely affect our tax expense and/or tax balances, and changes in tax policies could materially adversely impact our business. Changes in regulations, laws and tariffs and how they are implemented and interpreted may have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects.

Our operations are subject to rules relating to transactions among the California Utilities and other Sempra Energy businesses. These rules are commonly referred to as “affiliate rules,” which primarily impact commodity and commodity-related transactions. These businesses could be materially adversely affected by changes in these rules or to their interpretations, or by additional CPUC or FERC rules that further restrict our ability to sell electricity or natural gas to, or to trade with, the California Utilities and with each other. Affiliate rules also restrict these businesses from entering into any such transactions with the California Utilities. Any such restrictions on or approval requirements for transactions among affiliates could materially adversely affect the LNG terminals, natural gas pipelines, electric generation facilities, or other operations of our subsidiaries, which could have a material adverse effect on our businesses, results of operations and/or prospects.

Our businesses require numerous permits, licenses, franchise agreements and other governmental approvals from various federal, state, local and foreign governmental agencies; any failure to obtain or maintain required permits, licenses or approvals could cause our sales to materially decline and/or our costs to materially increase, and otherwise materially adversely affect our businesses, cash flows, financial condition, results of operations and/or prospects.

All our existing and planned development projects require multiple approvals. The acquisition, construction, ownership and operation of marine and inland ethane and liquid fuels, LNG and LPG terminals and storage; natural gas, propane and ethane pipelines and distribution and storage facilities; and electric generation, transmission and distribution infrastructure require

numerous permits, licenses, franchise agreements, certificates and other approvals from federal, state, local and foreign governmental agencies. Once received, approvals may be subject to litigation, and projects may be delayed, or approvals reversed or modified in litigation or otherwise. In addition, permits, licenses, franchise agreements, certificates and other approvals may be modified, rescinded or fail to be extended by one or more of the governmental agencies and authorities that oversee our businesses. SoCalGas' franchise agreements with Los Angeles County and the City of Los Angeles, where the Aliso Canyon natural gas storage facility is located, are due to expire in 2023 and 2019, respectively. SDG&E's franchise agreement with the City of San Diego is due to expire in 2021. If there is a delay in obtaining required regulatory approvals or failure to obtain or maintain required approvals or to comply with applicable laws or regulations, we may be precluded from constructing or operating facilities, or we may be forced to incur additional costs. Further, accidents beyond our control may cause us to violate the terms of conditional use permits, causing delays in projects. Any such delay or failure to obtain or maintain necessary permits, licenses, certificates and other approvals could cause our sales to materially decline, and/or our costs to materially increase, and otherwise materially adversely affect our businesses, cash flows, financial condition, results of operations and/or prospects.

Our businesses have significant environmental compliance costs, and future environmental compliance costs could have a material adverse effect on our cash flows and results of operations.

Our businesses are subject to extensive federal, state, local and foreign statutes, rules and regulations and mandates relating to environmental protection, including, air quality, water quality and usage, wastewater discharge, solid waste management, hazardous waste disposal and remediation, conservation of natural resources, wetlands and wildlife, renewable energy resources, climate change and GHG emissions. We are required to obtain numerous governmental permits, licenses, certificates and other approvals to construct and operate our businesses. Additionally, to comply with these legal requirements, we must spend significant amounts on environmental monitoring, pollution control equipment, mitigation costs and emissions fees. The California Utilities may be materially adversely affected if these additional costs for projects are not recoverable in rates. In addition, we may be ultimately responsible for all on-site liabilities associated with the environmental condition of our marine and inland ethane and liquid fuels, LNG and LPG terminals and storage; natural gas, propane and ethane pipelines and distribution and storage facilities; electric generation, transmission and distribution infrastructure; and other energy projects and properties; regardless of when the liabilities arose and whether they are known or unknown, which exposes us to risks arising from contamination at our former or existing facilities or with respect to offsite waste disposal sites that have been used in our operations. In the case of our California and other regulated utilities, some of these costs may not be recoverable in rates. Our facilities, including those in our JVs, are subject to laws and regulations that have been the subject of increased enforcement activity with respect to power generation facilities. Failure to comply with applicable environmental laws, regulations and permits may subject our businesses to substantial penalties and fines and/or significant curtailments of our operations, which could materially adversely affect our cash flows and/or results of operations.

Increasing international, national, regional and state-level environmental concerns as well as related new or proposed legislation and regulation may have substantial negative effects on our operations, operating costs and the scope and economics of proposed expansions, which could have a material adverse effect on our results of operations, cash flows and/or prospects. In particular, state-level laws and regulations, as well as potential state, national and international legislation and regulation relating to the control and reduction of GHG emissions, may materially limit or otherwise materially adversely affect our operations. The implementation of recent and proposed California legislation and regulation may materially adversely affect our non-utility businesses by imposing, among other things, additional costs associated with emission limits, controls and the possible requirement of carbon taxes or the purchase of emissions credits. Similarly, SB 350 requires all load-serving entities, including SDG&E, to file integrated resource plans that are intended to ultimately enable the electric sector to achieve reductions in GHG emissions of 40 percent compared to 1990 levels by 2030. Our California Utilities may be materially adversely affected if these additional costs are not recoverable in rates. Even if recoverable, the effects of existing and proposed GHG emission reduction standards may cause rates to increase to levels that substantially reduce customer demand and growth and may have a material adverse effect on the California Utilities' cash flows. SDG&E may also be subject to significant penalties and fines if certain mandated renewable energy goals are not met.

In addition, existing and future laws, orders and regulations regarding mercury, nitrogen and sulfur oxides, particulates, methane or other emissions could result in requirements for additional monitoring, pollution monitoring and control equipment, safety practices or emission fees, taxes or penalties that could materially adversely affect our results of operations and/or cash flows. Moreover, existing rules and regulations may be interpreted or revised in ways that may materially adversely affect our results of operations and/or cash flows.

We provide further discussion of these matters in "Item 7. MD&A" and in Note 16 of the Notes to Consolidated Financial Statements.

Our businesses, results of operations, financial condition and/or cash flows may be materially adversely affected by the outcome of litigation against us.

Sempra Energy and its subsidiaries are defendants in numerous lawsuits and arbitration proceedings, including in connection with the Aliso Canyon natural gas storage facility natural gas leak. We have spent, and continue to spend, substantial amounts of money and time defending these lawsuits and proceedings, and in related investigations and regulatory proceedings. We discuss pending proceedings in Note 16 of the Notes to Consolidated Financial Statements and in “Item 7. MD&A.” The uncertainties inherent in lawsuits, arbitrations and other legal proceedings make it difficult to estimate with any degree of certainty the costs and effects of resolving these matters. In addition, juries have demonstrated a willingness to grant large awards, including punitive damages, in personal injury, product liability, property damage and other claims. Accordingly, actual costs incurred may differ materially from insured or reserved amounts and may not be recoverable in whole or in part by insurance or in rates from our customers, which in each case could materially adversely affect our businesses, cash flows, results of operations and/or financial condition.

We cannot and do not attempt to fully hedge our assets or contract positions against changes in commodity prices. In addition, for those contract positions that are hedged, our hedging procedures may not mitigate our risk as planned.

To reduce financial exposure related to commodity price fluctuations, we may enter into contracts to hedge our known or anticipated purchase and sale commitments, inventories of natural gas and LNG, natural gas storage and pipeline capacity and electric generation capacity. As part of this strategy, we may use forward contracts, physical purchase and sales contracts, futures, financial swaps, and options. We do not hedge the entire exposure to market price volatility of our assets or our contract positions, and the coverage will vary over time. To the extent we have unhedged positions, or if our hedging strategies do not work as planned, fluctuating commodity prices could have a material adverse effect on our results of operations, cash flows and/or financial condition. Certain of the contracts we use for hedging purposes are subject to fair value accounting. Such accounting may result in gains or losses in earnings for those contracts. In certain cases, these gains or losses may not reflect the associated losses or gains of the underlying position being hedged.

Risk management procedures may not prevent losses.

Although we have in place risk management and control systems that use advanced methodologies to quantify and manage risk, these systems may not prevent material losses. Risk management procedures may not always be followed as intended by our businesses or may not work as planned. In addition, daily value-at-risk and loss limits are based on historic price movements. If prices significantly or persistently deviate from historic prices, the limits may not protect us from significant losses. As a result of these and other factors, there is no assurance that our risk management procedures will prevent losses that would materially adversely affect our results of operations, cash flows and/or financial condition.

The operation of our facilities depends on good labor relations with our employees.

Several of our businesses have entered into and have in place collective bargaining agreements with different labor unions. Our collective bargaining agreements are generally negotiated on a company-by-company basis. Any failure to reach an agreement on new labor contracts or to negotiate these labor contracts might result in strikes, boycotts or other labor disruptions. Labor disruptions, strikes or significant negotiated wage and benefit increases, whether due to union activities, employee turnover or otherwise, could have a material adverse effect on our businesses, results of operations and/or cash flows.

New business technologies implemented by us or developed by others present, among other things, a risk for increased attacks on our information systems and the integrity of our energy grid and our natural gas pipeline and storage infrastructure.

In addition to general information and cyber risks that all Fortune 500 corporations face (e.g. malware, malicious intent by insiders and inadvertent disclosure of sensitive information), the utility industry faces evolving cybersecurity risks associated with protecting sensitive and confidential customer information, Smart Grid infrastructure, and natural gas pipeline and storage infrastructure. Deployment of new business technologies represents a new and large-scale opportunity for attacks on our information systems and confidential customer information, as well as on the integrity of the energy grid and the natural gas infrastructure. Additionally, we often rely on third party vendors to deploy new business technologies and maintain, modify and update our systems, including systems that manage sensitive information. These third parties could fail to establish adequate risk management and information security measures to protect our systems and information. While our computer systems have been, and will continue to be, subjected to computer viruses or other malware, unauthorized access attempts, and cyber- or phishing-attacks, to date we have not detected a material breach of cybersecurity. Addressing these risks is the subject of significant ongoing activities across Sempra Energy’s businesses, including investing in risk management and information security measures to protect our systems. The cost and operational consequences of implementing, maintaining and enhancing further system protection measures could increase significantly to overcome increasingly intense, complex and sophisticated cyber risks. Despite our best efforts, our businesses may not be fully insulated from cyber-attacks and system disruptions. An attack on our

information systems, the integrity of the energy grid, our natural gas, ethane, LNG, LPG or propane pipeline and storage infrastructure or one of our facilities, or unauthorized access to confidential customer information, could result in energy delivery service failures, financial and reputational loss, violations of privacy laws, customer dissatisfaction and litigation, any of which, in turn, could have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects.

In the ordinary course of business, Sempra Energy and its subsidiaries collect and retain sensitive information, including personal identification information about customers and employees, customer energy usage and other information. The theft, damage or improper disclosure of sensitive electronic data can subject us to penalties for violation of applicable privacy laws, subject us to claims from third parties, require compliance with notification and monitoring regulations, and harm our reputation. Sempra Energy maintains cyber liability insurance, but this insurance is limited in scope and subject to exceptions, conditions and coverage limitations and may not cover any or even a substantial portion of the costs associated with the consequences of personal, confidential or proprietary information being compromised and there is no guarantee that the insurance that we do maintain will continue to be available at rates that we believe are commercially reasonable.

Further, as seen with recent cyber-attacks around the world, the goal of a cyber-attack may be primarily to inflict large-scale harm on a company and the places where it operates. Any such cyber-attack could cause widespread disruptions to our operating, financial and administrative systems, including the destruction of critical information and programming that could materially adversely affect our business operations and the integrity of the power grid, negatively impact our ability to produce accurate and timely financial statements or comply with ongoing disclosure obligations or other regulatory requirements, and/or release confidential information about our company and our customers, employees and other constituents, any of which could lead to sanctions or negatively affect the general perception of our business in the financial markets and which could have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects.

Risks Related to the California Utilities

The California Utilities are subject to extensive regulation by state, federal and local legislative and regulatory authorities, which may materially adversely affect us.

The CPUC regulates the California Utilities' rates, except SDG&E's electric transmission rates which are regulated by the FERC. The CPUC also regulates the California Utilities':

- conditions of service;
- sales of securities;
- rates of return;
- capital structure;
- rates of depreciation; and
- long-term resource procurement.

The CPUC conducts various reviews and audits of utility operations, safety standards and practices, compliance with CPUC regulations and standards, affiliate relationships and other matters. These reviews and audits may result in disallowances, fines and penalties that could materially adversely affect our financial condition, results of operations and/or cash flows. SoCalGas and SDG&E may be subject to penalties or fines related to their operation of natural gas pipelines and storage and, for SDG&E, electric operations, under regulations concerning natural gas pipeline safety and citation programs concerning both gas and electric safety, which could have a material adverse effect on their results of operations, financial condition and/or cash flows. We discuss various CPUC proceedings relating to the California Utilities' rates, costs, incentive mechanisms and performance-based regulation in Notes 4, 15 and 16 of the Notes to Consolidated Financial Statements and in "Item 7. MD&A."

The CPUC periodically approves the California Utilities' rates based on authorized capital expenditures, operating costs, including income taxes, and an authorized rate of return on investment, as well as settlements. Delays by the CPUC on decisions authorizing recovery or denying recovery, after-the-fact reasonableness reviews with unclear standards, authorizations for less than full recovery or rejection of their settlements may adversely affect the working capital, cash flows and financial condition of each of the California Utilities. If the California Utilities receive an adverse CPUC decision and/or actual capital expenditures and/or operating costs were to exceed the amounts approved by the CPUC, our results of operations, financial condition, cash flows and/or prospects could be materially adversely affected.

SoCalGas and SDG&E have significantly invested and continue to invest in major programs, such as PSEP, under an approved CPUC decision tree framework. However, the total investment to date is substantially subject to CPUC reasonableness review. Although we believe these costs have been prudently incurred, the standards applied by the CPUC could result in the

disallowance of a portion of these historical costs, which could adversely affect SDG&E's, SoCalGas' and Sempra Energy's results of operations, financial condition and cash flows.

The CPUC now incorporates a risk-based decision-making framework in its review of GRC applications for major natural gas and electric utilities in California. We cannot estimate whether its application in the 2019 GRC or future GRC applications will result in full recovery of costs. We discuss this further in Note 4 of the Notes to Consolidated Financial Statements.

In California, there are laws that establish rules governing, among other subjects, communications between CPUC officials, CPUC staff and regulated utilities. Rules and processes around *ex parte* communications could result in delayed decisions, increased investigations, enforcement actions and penalties. In addition, the CPUC or other parties may initiate investigations of past communications between public utilities and CPUC officials and staff that could result in reopening completed proceedings for reconsideration.

The FERC regulates electric transmission rates, the transmission and wholesale sales of electricity in interstate commerce, transmission access, the rates of return on investments in electric transmission assets, and other similar matters involving SDG&E.

The California Utilities may be materially adversely affected by new legislation, regulations, decisions, orders or interpretations of the CPUC, the FERC or other regulatory bodies. In addition, existing legislation or regulations may be revised or reinterpreted. New, revised or reinterpreted legislation, regulations, decisions, orders or interpretations could change how the California Utilities operate, could affect their ability to recover various costs through rates or adjustment mechanisms, or could require them to incur substantial additional expenses. In September 2018, the Governor of California signed into law SB 901, which includes a number of measures primarily intended to address certain wildfire risks relevant to consumers and utilities and guidelines for the CPUC to determine whether utilities acted reasonably in order to recover costs related to wildfires. Among other things, SB 901 also contains provisions for utility issuance of recovery bonds with respect to certain wildfire costs, subject to CPUC approval. SB 901 did not change the doctrine of inverse condemnation, which imposes strict liability on a utility (meaning that the utility may be found liable regardless of fault) whose equipment is determined to be a cause of a fire. We are unable to predict how the CPUC will apply SB 901 and its impact on the California Utilities' ability to recover certain costs and expenses in cases where the California Utilities' equipment is determined to be a cause of a fire, and specifically in the context of the application of inverse condemnation.

The construction and expansion of the California Utilities' natural gas pipelines, SoCalGas' storage facilities and SDG&E's electric transmission and distribution facilities require numerous permits, licenses, rights-of-way and other approvals from federal, state and local governmental agencies, including approvals and renewals of rights-of-way over Native American tribal land held in trust by the federal government. Successfully maintaining or renewing any or all of these approvals could result in higher costs or, in the event one or more of these approvals were to expire, could require us to remove the associated assets from service, construct new assets intended to bypass the impacted area, or both, and our ability to recover higher costs associated with these events cannot be assured. If there are delays in obtaining these approvals, failure to obtain or maintain these approvals, difficulties in renewing rights-of-way and other property rights, or failure to comply with applicable laws or regulations, the California Utilities' businesses, cash flows, results of operations, financial condition and/or prospects could be adversely affected.

Successfully coordinating and completing expansion and construction projects requires good execution from our employees and contractors, cooperation of third parties and the absence of litigation and regulatory delay. In the event that one or more of these projects is delayed or experiences significant cost overruns, this could have a material adverse effect on the California Utilities. The California Utilities may invest a significant amount of money in a major capital project prior to receiving regulatory approval. If the project does not receive regulatory approval, if the regulatory approval is conditioned on major changes, or if management decides not to proceed with the project, they may be unable to recover any or all amounts invested in that project, which could materially adversely affect their financial condition, results of operations, cash flows and/or prospects.

Our California Utilities are also affected by the activities of organizations such as TURN, Utility Consumers' Action Network, Sierra Club and other stakeholder, advocacy and activist groups. Operations that may be influenced by these groups include:

- the rates and rate design used to charge to our customers;
- our ability to site and construct new facilities;
- our ability to purchase, construct or enter into other arrangements with generating facilities;
- our ability to shut down power for safety reasons, including potentially dangerous wildfire conditions;
- general safety;
- accounting and income tax matters, including changes in tax law;
- transactions between affiliates;

- the installation of environmental emission controls equipment;
- our ability to decommission generating and other facilities and recover the remaining carrying value of such facilities and related costs;
- our ability to recover costs incurred in connection with nuclear decommissioning activities from trust funds established to pay for such costs;
- the amount of certain sources of energy we must use, such as renewable sources; limits on the amount of certain energy sources we can use, such as natural gas; and programs to encourage reductions in energy usage by customers; and
- the amount of costs associated with these and other operations that may be recovered from customers.

Extreme weather conditions, changing weather patterns and population growth in areas of the State of California in environments with historically higher risk of wildfires could materially affect the California Utilities' and Sempra Energy's business, financial condition, results of operations, liquidity, and cash flows.

Frequent and more severe drought conditions, unseasonably warm temperatures and stronger winds have increased the degree and prevalence of wildfires in California including in SDG&E's and SoCalGas' service territories, which could place third party property and our electric and natural gas infrastructure in jeopardy and reduce the availability of hydroelectric generators. This could result in temporary power shortages in SDG&E's and SoCalGas' service territories and/or catastrophic destruction of third party property for which SDG&E or SoCalGas may be liable and unable to recover from ratepayers or may have inadequate insurance coverage. SB 901, signed into law in 2018, includes a number of measures primarily intended to address certain wildfire risks relevant to consumers and utilities and guidelines for the CPUC to determine whether utilities acted reasonably in order to recover costs related to wildfires. However, in the event of a significant wildfire involving SDG&E equipment, SB 901 may not be sufficient to enable timely access to capital necessary to address, in whole or in part, inverse condemnation liabilities, or could result in the inability to pass such liabilities through to customers even if SDG&E complies with its wildfire mitigation plans. In addition to these changing environmental conditions, the State of California has been subject to housing shortages such that certain local land use policies and forestry management practices have been relaxed in certain cases to allow for the construction and development of residential and commercial projects in high risk fire areas that may not have the infrastructure or contingency plans necessary to address such risk. In addition, severe weather conditions could result in delays and/or cost increases to our capital projects.

Severe rainstorms and associated high winds in our service territories, as well as flooding and mudslides where vegetation has been destroyed as result of human modification or wildfires, could damage our electric and natural gas infrastructure, resulting in increased expenses, including higher maintenance and repair costs and interruptions in electricity and natural gas delivery services. As a result, these events can have significant financial consequences, including regulatory penalties and disallowances if the California Utilities encounter difficulties in restoring service to their customers on a timely basis. Further, the cost of storm restoration efforts may not be fully recoverable through the regulatory process. Any such events could have a material adverse effect on our businesses, financial condition, results of operations and cash flows.

In addition, flooding caused by rising sea levels could damage the California Utilities' facilities, including gas and electric transmission and distribution assets. The California Utilities could incur substantial costs to repair or replace these facilities, restore service, or compensate customers and other third parties for damages or injuries.

Events or conditions caused by climate change could have a greater impact on the California Utilities' operations than the California Utilities currently anticipate. If the CPUC fails to adjust the California Utilities' rates to reflect the impact of events or conditions caused by climate change or if a major fire is determined to be caused by our equipment, Sempra Energy's and the California Utilities' business, financial condition, results of operations, liquidity, and cash flows could be materially affected.

Insurance coverage for future wildfires may be unobtainable, prohibitively expensive or insufficient to cover losses we may incur, and we may be unable to recover costs in excess of insurance through regulatory mechanisms.

We have experienced increased costs and difficulties in obtaining insurance coverage for wildfires that could arise from the California Utilities' operations, particularly SDG&E's operations. In addition, the insurance that has been obtained for wildfire liabilities may not be sufficient to cover all losses that we may incur. Uninsured losses and increases in the cost of insurance may not be recoverable in customer rates. California courts have invoked the doctrine of inverse condemnation for wildfire damages, whereby if a utility company's equipment, such as its electric distribution and transmission lines, are determined to be a cause of one or more fires, the utility could be held strictly liable for damages, as well as attorneys' fees, without having been found negligent. As a result of the strict liability standard applied to wildfires, recent losses recorded by insurance companies, and the risk of an increase in the number and size of wildfires, insurance for wildfire liabilities may not be available or may be available only at rates that are prohibitively expensive. In addition, even if insurance for wildfire liabilities is available, it may not be available in such amounts as are necessary to cover potential losses. A loss which is not fully insured or cannot be recovered in

customer rates, which was the result in a decision by the CPUC denying SDG&E's recovery of costs for the 2007 wildfires, could materially adversely affect Sempra Energy's and one or both of the California Utilities' financial condition, cash flows and results of operations. We are unable to predict whether we would be allowed to recover in rates the increased costs of insurance or the costs of any uninsured losses.

The California Utilities are subject to risks arising from the operation and improvement of their electricity and natural gas infrastructure and information technology systems, which, if they materialize, could adversely affect Sempra Energy's and the California Utilities' financial results.

The California Utilities own and operate electric transmission and distribution facilities and natural gas storage facilities, which are, in many cases, interconnected and/or managed by information technology systems. The California Utilities undertake substantial capital investment projects to construct, replace, improve and upgrade these facilities and systems, but while these capital investment projects are in process and even once completed, there is a risk of, among other things, potential breakdown or failure of equipment or processes due to aging infrastructure and information technology systems, human error in operations or maintenance, shortages of or delays in obtaining equipment, material and labor, operational restrictions resulting from environmental requirements and governmental interventions, and performance below expected levels. In addition, as discussed above, weather-related incidents and other natural disasters can disrupt generation, transmission and distribution delivery systems. Because our transmission facilities are interconnected with those of third parties, the operation of our facilities could also be adversely affected by unexpected or uncontrollable events occurring on the systems of such third parties.

Additional risks associated with the ability of the California Utilities to safely and reliably operate, maintain, improve and upgrade their facilities and systems, many of which are beyond the California Utilities' control, include:

- challenges associated with meeting customer demand for electricity and/or natural gas that results in customer curtailments, controlled/uncontrolled gas outages, gas surges back into homes, serious personal injury or loss of life;
- a prolonged statewide electrical black-out that results in damage to the California Utilities' equipment or damage to property owned by customers or other third parties;
- inadequate emergency preparedness plans and the failure to respond effectively to a catastrophic event that could lead to public or employee harm or extended outages; severe weather events such as storms, tornadoes, floods, drought, earthquakes, tsunamis, fires, pandemics, solar events, electromagnetic events or other natural disasters;
- the release of hazardous or toxic substances into the air, water or soil, including, for example, gas leaks from natural gas storage facilities; and
- attacks by third parties, including cyber-attacks, acts of terrorism, vandalism or war.

The occurrence of any of these events could affect demand for electricity or natural gas; cause unplanned outages; damage the California Utilities' assets and/or operations; damage the assets and/or operations of third parties on which the California Utilities rely; damage property owned by customers or others; and cause personal injury or death. As a result, the California Utilities could incur costs to purchase replacement power, to repair assets and restore service, and to compensate third parties. Any such events could materially adversely affect Sempra Energy's and one or both of the California Utilities' financial condition, cash flows and results of operations.

SoCalGas has incurred and may continue to incur significant costs and expenses related to the natural gas leak at its Aliso Canyon natural gas storage facility and mitigating local community environmental impacts from the Leak, some or a substantial portion of which may not be recoverable through insurance, and SoCalGas also may incur significant liabilities for damages, restitution, fines, penalties and other costs, and emissions mitigation activities as a result of this incident, some or a significant portion of which may not be recoverable through insurance or may exceed insurance coverage.

In October 2015, SoCalGas discovered a leak at one of its injection-and-withdrawal wells, SS25, at its Aliso Canyon natural gas storage facility, located in the northern part of the San Fernando Valley in Los Angeles County, California. SS25 is one of more than 100 injection-and-withdrawal wells at the storage facility. SoCalGas worked closely with several of the world's leading experts to stop the Leak, and in February 2016, DOGGR confirmed that the well was permanently sealed.

Local Community Mitigation Efforts

Pursuant to directives by the DPH and orders by the LA Superior Court, SoCalGas provided temporary relocation support to residents in the nearby community who requested it, at significant cost to SoCalGas. These programs ended in July 2016.

In May 2016, the DPH issued a directive that SoCalGas additionally professionally clean (in accordance with the proposed protocol prepared by the DPH) the homes of all residents located within the Porter Ranch Neighborhood Council boundary, or who participated in the relocation program, or who are located within a five-mile radius of the Aliso Canyon natural gas storage

facility and experienced symptoms from the Leak (the Directive). SoCalGas disputes the Directive, contending that it is invalid and unenforceable, and has filed a petition for writ of mandate to set aside the Directive.

The costs incurred to remediate and stop the Leak and to mitigate local community impacts have been significant and may increase, and we may be subject to potentially significant damages, restitution, and civil, administrative and criminal fines, penalties and other costs. To the extent any of these costs are not covered by insurance (including any costs in excess of applicable policy limits), or if there are significant delays in receiving insurance recoveries, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Civil and Criminal Litigation

As of February 21, 2019, 393 lawsuits, including approximately 48,000 plaintiffs, are pending against SoCalGas, some of which have also named Sempra Energy.

Five shareholder derivative actions alleging breach of fiduciary duties have been filed against certain officers and directors of Sempra Energy and/or SoCalGas, four of which were joined in a Consolidated Shareholder Derivative Complaint in August 2017. Three complaints have also been filed by public entities, including the California Attorney General and the County of Los Angeles. These complaints seek various remedies, including injunctive relief, abatement of the public nuisance, civil penalties, payment of the cost of a longitudinal health study and money damages, as well as punitive damages and attorneys' fees. Additional litigation may be filed against us in the future related to the Leak or our responses thereto. In August 2018, SoCalGas entered into an agreement to settle these public entity actions, which was approved by the LA Superior Court in February 2019. These various lawsuits have been coordinated before a single court and will be managed under master complaints.

Additionally, a misdemeanor criminal complaint was filed by the LA County District Attorney's office, as to which SoCalGas entered a settlement that was approved by the LA Superior Court but is subject to appeal by certain residents. In addition, a federal securities class action alleging violation of the federal securities laws was filed against Sempra Energy and certain of its officers and directors in the SDCA. This complaint was dismissed by the court in March 2018, and in December 2018, the court declined to reconsider its order. For a more detailed description of the civil and criminal lawsuits brought against us, see Note 16 of the Notes to Consolidated Financial Statements.

The costs of defending against the civil and criminal lawsuits, cooperating with these investigations, and any damages, restitution, and civil, administrative and criminal fines, penalties and other costs, if awarded or imposed, as well as the costs of mitigating the actual natural gas released, could be significant and to the extent not covered by insurance (including any costs in excess of applicable policy limits), if there were to be significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are not tax deductible, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Natural Gas Storage Operations and Regulatory Proceedings

Natural gas withdrawn from storage is important for service reliability during peak demand periods, including peak electric generation needs in the summer and heating needs in the winter. The Aliso Canyon natural gas storage facility, with a storage capacity of 86 Bcf (which represents 63 percent of SoCalGas' natural gas storage inventory capacity), is the largest SoCalGas storage facility and an important element of SoCalGas' delivery system. As a result of the Leak, beginning October 24, 2015, pursuant to orders by DOGGR and the Governor of the State of California, and SB 380, SoCalGas suspended injection of natural gas into the Aliso Canyon natural gas storage facility. In February 2017, the CPUC opened a proceeding pursuant to SB 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility while still maintaining energy and electric reliability for the region. The order establishing the scope of the proceeding expressly excludes issues with respect to air quality, public health, causation, culpability or cost responsibility regarding the Leak. Following a comprehensive safety review and authorization by DOGGR and the CPUC's Executive Director, SoCalGas resumed limited injection operations in July 2017. Limited withdrawals of natural gas from the Aliso Canyon natural gas storage facility began in 2017 and continued in 2018 to augment natural gas supplies during critical demand periods. In January 2019, the CPUC concluded Phase 1 of the proceeding initiated in February 2017 by establishing a framework for the hydraulic, production cost and economic modeling assumptions for the potential reduction in usage or elimination of the Aliso Canyon natural gas storage facility. Phase 2 of the proceeding began in the first quarter of 2019 and will evaluate the impacts of reducing or eliminating the usage of the Aliso Canyon natural gas storage facility using the established framework and models.

If the Aliso Canyon natural gas storage facility were to be permanently closed, or if future cash flows were otherwise insufficient to recover its carrying value, it could result in an impairment of the facility and significantly higher than expected operating costs and/or additional capital expenditures, and natural gas reliability and electric generation could be jeopardized. At December 31, 2018, the Aliso Canyon natural gas storage facility had a net book value of \$724 million. Any significant impairment of this asset

could have a material adverse effect on SoCalGas' and Sempra Energy's results of operations for the period in which it is recorded. Higher operating costs and additional capital expenditures incurred by SoCalGas may not be recoverable in customer rates, and SoCalGas' and Sempra Energy's results of operations, cash flows and financial condition may be materially adversely affected.

Governmental Investigations, Orders and Additional Regulation

Various governmental agencies, including DOE, DOGGR, DPH, SCAQMD, CARB, Los Angeles Regional Water Quality Control Board, California Division of Occupational Safety and Health, CPUC, PHMSA, EPA, Los Angeles County District Attorney's Office and California Attorney General's Office, have investigated or are investigating this incident. In January 2016, DOGGR and the CPUC selected Blade Energy Partners to conduct, under their supervision, an independent analysis of the technical root cause of the Leak, to be funded by SoCalGas. The root cause analysis is ongoing, and its timing is under the control of Blade Energy Partners, DOGGR and the CPUC.

In March 2016, the CARB issued its recommended approach to achieve full mitigation of the emissions from the Leak, and in October 2016, issued its report concluding that SoCalGas should mitigate 109,000 metric tons of methane to fully mitigate the GHG impacts of the Leak. This mitigation will be achieved through a mitigation agreement SoCalGas has entered in connection with its settlement of public entity complaints. For a more detailed description of the settlement, see Note 16 of the Notes to Consolidated Financial Statements.

PHMSA, DOGGR, SCAQMD, EPA and CARB have each commenced separate rulemaking proceedings to adopt further regulations covering natural gas storage facilities and injection wells. DOGGR has issued new draft regulations for all storage fields in California, and in 2016, the California Legislature enacted four separate bills providing for additional regulation of natural gas storage facilities. Additional hearings in the California Legislature, as well as with various other federal and state regulatory agencies, may be scheduled, and additional laws, orders, rules and regulations may be adopted.

Higher operating costs and additional capital expenditures incurred by SoCalGas as a result of new laws, orders, rules and regulations arising out of this incident or our responses thereto could be significant and may not be recoverable through insurance or in customer rates, and SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations may be materially adversely affected by any such new laws, orders, rules and regulations.

Insurance and Estimated Costs

Excluding directors' and officers' liability insurance, we have at least four kinds of insurance policies that together provide between \$1.2 billion and \$1.4 billion in insurance coverage, depending on the nature of the claims. These policies are subject to various policy limits, exclusions and conditions. We intend to pursue the full extent of our insurance coverage for the costs we have incurred or may incur. Through December 31, 2018, we have received \$566 million of insurance proceeds for portions of control-of-well expenses, lost gas, temporary relocation, and other costs. There can be no assurance that we will be successful in obtaining additional insurance recovery for costs related to the Leak under the applicable policies, and to the extent we are not successful in obtaining additional recovery or these costs exceed the amount of our coverage, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial conditions and results of operations.

At December 31, 2018, SoCalGas estimates that its costs related to the Leak are \$1,055 million, which includes \$1,027 million of costs recovered or probable of recovery from insurance. This estimate may rise significantly as more information becomes available. In addition, costs not included in the cost estimate of \$1,055 million could be material. As described in "Civil and Criminal Litigation" above, the actions against us seek compensatory and punitive damages, restitution, and civil, administrative and criminal fines, penalties and other costs, which except for the amounts paid or estimated to settle certain actions, are not included in the \$1,055 million cost estimate as it is not possible at this time to predict the outcome of these actions or reasonably estimate the amount of damages, restitution or civil, administrative or criminal fines, penalties or other costs. The recorded amounts above also do not include costs to clean additional homes pursuant to the Directive, future legal costs to defend litigation, and other potential costs that we currently do not anticipate incurring or that we cannot reasonably estimate. Furthermore, the cost estimate of \$1,055 million does not include certain other costs incurred by Sempra Energy through December 31, 2018 associated with defending shareholder derivative lawsuits. There can be no assurance that we will be successful in obtaining insurance coverage for these costs under the applicable policies, and to the extent we are not successful in obtaining coverage or these costs exceed the amount of our coverage, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Additional Information

We discuss Aliso Canyon natural gas storage facility matters further in Note 16 of the Notes to Consolidated Financial Statements and in “Item 7. MD&A – Factors Influencing Future Performance.”

Natural gas pipeline safety assessments may not be fully or adequately recovered in rates.

Pending the outcome of various regulatory agency evaluations of natural gas pipeline safety regulations, practices and procedures, Sempra Energy, including the California Utilities, may incur incremental expense and capital investment associated with their natural gas pipeline operations and investments. The California Utilities filed implementation plans with the CPUC to test or replace natural gas transmission pipelines located in populated areas that either have not been pressure tested or lack sufficient documentation of a pressure test, to enhance existing valve infrastructure and to retrofit pipelines to allow for the use of in-line inspection technology, referred to as SoCalGas’ and SDG&E’s PSEP.

In June 2014, the CPUC issued a final decision approving the utilities’ plan for implementing PSEP and established criteria to determine the amounts related to PSEP that may be recovered from ratepayers and the processes for recovery of such amounts, including providing that such costs are subject to a reasonableness review. In the future, certain PSEP costs may be subject to recovery as determined by separate regulatory filings with the CPUC, including GRC filings.

Various PSEP-related proceedings are regularly pending before the CPUC regarding the California Utilities’ reasonableness review and cost recovery requests, which are often challenged by intervening parties. These proceedings are described in more detail in “Item 7. MD&A – Factors Influencing Future Performance.” In the future, consumer advocacy groups may similarly challenge the California Utilities’ petitions for recovery and recommend disallowances in whole or in part with respect to applications to recover PSEP costs.

From 2011 through 2018, SoCalGas and SDG&E have invested approximately \$1.5 billion and \$372 million, respectively, in PSEP, with substantial additional expenditures planned. As of December 31, 2018, SoCalGas has received approval for recovery of \$33 million. If the CPUC denies or significantly delays rate recovery for PSEP and other gas pipeline safety costs incurred by SoCalGas and SDG&E, it could materially adversely affect the respective company’s cash flows, financial condition, results of operations and prospects.

The California Utilities are subject to increasingly stringent safety standards and the potential for significant penalties if regulators deem either SDG&E or SoCalGas to be out of compliance.

SB 291 requires the CPUC to develop and maintain a safety enforcement program that includes procedures for monitoring, data tracking and analysis, and investigations, and delegates citation authority to CPUC staff personnel under the direction of the CPUC Executive Director. In exercising this citation authority, the CPUC staff is to take into account voluntary reporting of potential violations, voluntary resolution efforts undertaken, prior history of violations, the gravity of the violation and the degree of culpability. The CPUC previously implemented both electric and gas safety enforcement programs whereby electric and gas utilities may be cited by CPUC staff for violations of the CPUC’s safety requirements or applicable federal standards.

Under each enforcement program, each day of an ongoing violation may be counted as an additional offense. The maximum penalty is \$50,000 per offense. CPUC staff has authority to issue citations up to an administrative limit of \$8 million per citation under either program and such citations may be appealed to the CPUC. Although citations issued under these enforcement programs do include an administrative limit, penalties issued by the CPUC can exceed this limit, having exceeded \$1.5 billion in one instance for an unrelated third party.

If the CPUC or its staff determine that either of SDG&E’s or SoCalGas’ operations and practices are not in compliance with applicable safety standards and operating procedures, the corrective or mitigation actions required to be in conformance, if not sufficiently funded in customer rates, and any penalties imposed, could materially adversely affect that company’s cash flows, financial condition, results of operations and prospects.

The failure by the CPUC to continue reforms of SDG&E’s rate structure, including the implementation of charges independent of consumption volume and reforms to reduce NEM rate subsidies, could have a material adverse effect on SDG&E’s business, cash flows, financial condition, results of operations and/or prospects.

The current electric residential rate structure in California is primarily based on consumption volume, which places a higher rate burden on customers with higher electric use while subsidizing lower use customers.

The NEM program is an electric billing tariff mechanism designed to promote the installation of on-site renewable generation (primarily solar installations). Under NEM, qualifying customer-generators receive a full retail rate for the energy they generate that is fed to the utility’s power grid. This occurs during times when the customer’s generation exceeds their own energy usage (wholesale rates apply only if a customer’s annual generation exceeds their annual consumption). Under this structure, NEM

customers do not pay their proportionate share of the cost of maintaining and operating the electric transmission and distribution system, subject to certain limitations, while they still receive electricity from the system when their self-generation is inadequate to meet their electricity needs. The unpaid NEM costs are subsidized by customers not participating in NEM. Accordingly, as higher electric-use residential customers switch to NEM and self-generate energy, the burden on the remaining customers increases, which in turn encourages more self-generation, further increasing rate pressure on existing customers.

SDG&E implemented a successor NEM tariff in July 2016, after reaching the 617-MW cap established for the original NEM program. The successor NEM tariff requires NEM customers to pay some costs that would otherwise be borne by non-NEM customers and moves new NEM customers to TOU rates. These changes to the NEM program begin a process of reducing the cost burden on non-NEM customers, but SDG&E believes that further reforms are necessary and appropriate. In a January 2016 decision, the CPUC committed to revisit the NEM successor tariff and the adequacy of its NEM reforms, and we expect the review to begin in the second half of 2019.

The status of broader rate reform was established in July 2015, when the CPUC adopted a decision that provides a framework for rates that are more transparent, fair and sustainable. The decision provides for a minimum monthly bill, fewer rate tiers and a gradual reduction in the differences between the tiered rates, directs the utilities to pursue expanded TOU rates and implemented a super-user electric surcharge for usage that exceeds the baseline amount of energy used by customers by approximately 400 percent. The decision is being implemented over a five-year period from 2015 to 2020. The decision should result in relief for higher-use customers that do not exceed the super-user threshold and a rate structure that better aligns rates with actual costs to serve customers. The decision also establishes a process for utilities to seek implementation of a fixed charge for residential customers in 2020 (but it also sets certain conditions for the implementation of a fixed charge), after the initial reforms are implemented. We believe the establishment of a charge independent of consumption volume for residential customers may become more critical to help ensure rates are fair for all customers. Distributed energy resources and energy efficiency initiatives could generally reduce delivered volumes, increasing the importance of a fixed charge. In addition, the continuing increase of solar installations and other forms of self-generation adversely impacts the reliability of the electric transmission and distribution system and could increase fixed costs.

If the CPUC fails to continue to reform SDG&E's rate structure to maintain reasonable, cost-based electric rates that are competitive with alternative sources of power and adequate to maintain the reliability of the electric transmission and distribution system, such failure could lead to the disallowance of recovery for our costs, including power procurement costs, operating or capital costs, or the imposition of fines and penalties. Any of these developments could have a material adverse effect on SDG&E's and Sempra Energy's business, cash flows, financial condition, results of operations and/or prospects.

The electricity industry is undergoing significant change, including increased deployment of distributed energy resources, technological advancements, and political and regulatory developments.

Electric utilities in California are experiencing increasing deployment of distributed energy resources, such as solar, energy storage, energy efficiency and demand response technologies. This growth will eventually require modernization of the electric distribution grid to, among other things, accommodate two-way flows of electricity and increase the grid's capacity to interconnect distributed energy resources. The CPUC is conducting proceedings to: evaluate various demonstration projects and pilots; implement changes to the planning and operation of the electric distribution grid in order to prepare for higher penetration of distributed energy resources; consider future grid modernization and grid reinforcement investments; evaluate if traditional grid investments can be deferred by distributed energy resources, and if feasible, what, if any, compensation would be appropriate; and clarify the role of the electric distribution grid operator. These proceedings may result in new regulations, policies and/or operational changes that could materially adversely affect SDG&E's and Sempra Energy's businesses, cash flows, financial condition, results of operations and/or prospects.

SDG&E provides bundled electric procurement service through various resources that are typically procured on a long-term basis. While SDG&E provides such procurement service for most of its customer load, customers do have the ability to receive procurement service from a load serving entity other than SDG&E, through programs such as DA and CCA. DA is currently limited by a cap based on gigawatt hours. Utility customers could also receive procurement through CCA, if the customer's local jurisdiction (city) offers such a program. Several local political jurisdictions, including the City of San Diego and other municipalities, are considering or implementing a CCA, which could result in the departure of more than half of SDG&E's bundled load. When customers are served by another load serving entity, SDG&E no longer serves this departing load and the associated costs of the utility's procured resources could be borne by its remaining bundled procurement customers. State law requires that customers opting to have a CCA procure their electricity must absorb the cost of above-market electricity procurement commitments already made by SDG&E on their behalf. If adequate mechanisms are not maintained to ensure compliance with state law, remaining bundled customers of SDG&E could potentially experience large increases in rates for commodity costs under commitments made on behalf of CCA customers prior to their departure, which may not be fully

recoverable in rates by SDG&E. If legislative, regulatory or legal action were taken to prevent the timely recovery of these procurement costs or if mechanisms are not in place to ensure compliance with state law, the unrecovered costs could have a material adverse effect on SDG&E's and Sempra Energy's cash flows, financial condition and results of operations.

Natural gas and natural gas storage used in California to generate electricity has increasingly been the subject of political and public scrutiny, including a desire by some to further limit or eliminate reliance on natural gas as an energy source.

California legislators and stakeholder, advocacy and activist groups have expressed a desire to further limit or eliminate reliance on natural gas as an energy source by advocating increased use of renewable energy and electrification in lieu of the use of natural gas. A substantial reduction or the elimination of natural gas as an energy source in California could have a material adverse effect on SDG&E's, SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

SDG&E may incur substantial costs and liabilities as a result of its partial ownership of a nuclear facility that is being decommissioned.

SDG&E has a 20-percent ownership interest in SONGS, formerly a 2,150-MW nuclear generating facility near San Clemente, California, that is in the process of being decommissioned by Edison, the majority owner of SONGS. SONGS is subject to the jurisdiction of the NRC and the CPUC. SDG&E, and each of the other owners, holds its undivided interest as a tenant in common in the property, and each owner is responsible for financing its share of expenses and capital expenditures, including decommissioning activities. Although the facility is being decommissioned, SDG&E's ownership interest in SONGS continues to subject it to the risks of owning a partial interest in a nuclear generation facility, which include:

- the potential release of a radioactive material including from a natural disaster such as an earthquake or tsunami that could cause a catastrophic failure of the safety systems in place that are designed to prevent the release of radioactive material. If radioactive material is released including as a result of such failure, a substantial amount of radiation could be released and cause catastrophic harm to human health and the environment;
- the potential harmful effects on the environment and human health resulting from the prior operation of nuclear facilities and the storage, handling and disposal of radioactive materials;
- limitations on the amounts and types of insurance commercially available to cover losses that might arise in connection with operations and the decommissioning of the facility; and
- uncertainties with respect to the technological and financial aspects of decommissioning the facility.

In addition, SDG&E maintains NDTs for providing funds to decommission SONGS. Trust assets have been generally invested in equity and debt securities, which are subject to significant market fluctuations. A decline in the market value of trust assets or an adverse change in the law regarding funding requirements for decommissioning trusts could increase the funding requirements for these trusts, which in each case may not be fully recoverable in rates. Furthermore, CPUC approval is required in order to make withdrawals from these trusts. CPUC approval for certain expenditures may be denied by the CPUC altogether if the CPUC determines that the expenditures are unreasonable. Finally, decommissioning may be materially more expensive than we currently anticipate and therefore decommissioning costs may exceed the amounts in the trust funds. Rate recovery for overruns would require CPUC approval, which may not occur.

Interpretations of tax regulations could impact access to NDT funds for reimbursement of spent nuclear fuel management costs. Depending on how the IRS or the U.S. Department of Treasury ultimately interprets or alters regulations addressing the taxation of a qualified NDT, SDG&E may be restricted from withdrawing amounts from its qualified decommissioning trusts to pay for spent fuel management while Edison and SDG&E are seeking, or plan to seek, recovery of spent fuel management costs in litigation against, or in settlements with, the DOE. In December 2016, the IRS and the U.S. Department of Treasury issued proposed regulations that clarify the definition of "nuclear decommissioning costs," which are costs that may be paid for or reimbursed from a qualified trust fund. These proposed regulations will be effective prospectively once they are finalized. SDG&E is awaiting the adoption of, or additional refinement to, the proposed regulations before determining whether the proposed regulations will allow SDG&E to access the NDT funds for reimbursement or payment of the spent fuel management costs incurred in 2017 and subsequent years. Until the DOE litigation is resolved and/or IRS regulations regarding spent fuel management costs are confirmed to apply, SDG&E expects to continue to pay for its share of such spent fuel management costs. If SDG&E is unable to obtain timely access to the trusts for these costs, SDG&E's cash flows could be negatively impacted.

The occurrence of any of these events could result in a substantial reduction in our expected recovery and have a material adverse effect on SDG&E's and Sempra Energy's businesses, cash flows, financial condition, results of operations and/or prospects.

Risks Related to our Businesses Other Than the California Utilities

Business development activities may not be successful and projects under construction may not commence operation as scheduled, be completed within budget or operate at expected levels, which could have a material adverse effect on our businesses, financial condition, cash flows, results of operations and/or prospects.

The acquisition, development, construction and expansion of LNG liquefaction, marine and inland ethane and liquid fuels, and LPG terminals and storage; natural gas, propane and ethane pipelines and distribution and storage facilities; electric generation, transmission and distribution infrastructure; and other energy infrastructure projects involve numerous risks. We may be required to spend significant sums for preliminary engineering, permitting, fuel supply, resource exploration, legal and other expenses before we can determine whether a project is feasible, economically attractive, or capable of being built.

Success in developing a project is contingent upon, among other things:

- negotiation of satisfactory EPC agreements;
- negotiation of satisfactory LNG offtake and JV agreements;
- negotiation of supply, natural gas and LNG sales agreements or firm capacity service agreements and PPAs;
- timely receipt of required governmental permits, licenses, authorizations and rights-of-way and maintenance or extension of these authorizations;
- timely implementation and satisfactory completion of construction; and
- obtaining adequate and reasonably priced financing for the project.

Successful completion of a project may be materially adversely affected by, among other factors:

- unforeseen engineering problems;
- construction delays and contractor performance shortfalls;
- work stoppages;
- failure to obtain, maintain or extend required governmental permits, licenses, authorizations and rights-of-way;
- equipment unavailability or delay and cost increases;
- adverse weather conditions;
- environmental and geological conditions;
- litigation; and
- unsettled property rights.

If we are unable to complete a development project or if we have substantial delays or cost overruns, this could have a material adverse effect on our businesses, financial condition, cash flows, results of operations and/or prospects.

The operation of existing and future facilities also involves many risks, including the breakdown or failure of liquefaction, regasification and storage facilities, electric generation, transmission and distribution infrastructure or other equipment or processes, labor disputes, fuel interruption, environmental contamination and operating performance below expected levels. In addition, weather-related incidents and other natural disasters can disrupt liquefaction, generation, regasification, storage, transmission and distribution systems. The occurrence of any of these events could lead to our facilities being idled for an extended period of time or our facilities operating well below expected capacity levels, which may result in lost revenues or increased expenses, including higher maintenance costs and penalties. Such occurrences could materially adversely affect our businesses, financial condition, cash flows, results of operations and/or prospects.

The design, development and construction of the Cameron LNG liquefaction facility involves numerous risks and uncertainties.

With respect to our project to add LNG export capability at the Cameron LNG facility, Cameron LNG JV is building an LNG export facility consisting of three liquefaction trains designed to a total nameplate capacity of 13.9 Mtpa of LNG with an expected export capability of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. If the estimated construction, financing and other project costs for the facility exceed our contingency associated with the project budget adopted at the time of our final investment decision, we may have to make additional, unexpected cash contributions. The majority of the investment in the liquefaction project is project-financed and the balance is provided by the project partners. Any failure by the project partners to make their required investments on a timely basis could result in project delays and could materially adversely affect the development of the project. In addition, Sempra Energy has guaranteed a maximum of up to \$3.9 billion related to the project financing and financing-related agreements. These guarantees terminate upon Cameron LNG JV achieving “financial completion” of the initial three-train liquefaction project, including all three trains achieving commercial operation and meeting certain operational

performance tests. We anticipate that the guarantees will be terminated approximately nine months after all three trains achieve commercial operation. If, due to Cameron LNG JV's failure to satisfy the financial completion criteria, we are required to repay some or all of the \$3.9 billion under our guarantees, any such repayments could have a material adverse effect on our business, results of operations, cash flows, financial condition and/or prospects.

Large-scale construction projects like the design, development and construction of the Cameron LNG JV liquefaction facility involve numerous risks and uncertainties, including among others, the potential for unforeseen engineering challenges, severe weather events, substantial construction delays and increased costs. Cameron LNG JV has a turnkey EPC contract, and if the contractor becomes unwilling or unable to perform according to the terms and timetable of the EPC contract, the project could face substantial construction delays and potentially significantly increased costs. If the contractor's delays or failures are serious enough to cause the contractor to default under the EPC contract, such default could result in Cameron LNG JV's engagement of a substitute contractor. Based on a number of factors, we believe it is reasonable to expect that Cameron LNG JV will start generating earnings in the middle of 2019. These factors include, among others, the terms of the settlement agreement entered into in December 2017 with the EPC contractor to settle certain contractor's claims, the EPC contractor's progress to date, the current commissioning activities, the remaining work left to be performed, the project schedules received from the EPC contractor, Cameron LNG JV's own review of the project schedules, the assumptions underlying such schedules and the inherent risks in constructing and testing facilities such as the Cameron LNG JV liquefaction facility. The inability to complete the project in accordance with the current schedule, cost overruns, and the other risks described above could have a material adverse effect on our business, results of operations, cash flows, financial condition, credit ratings and/or prospects. For additional discussion of the Cameron LNG JV and of these risks and other risks relating to the development of the Cameron LNG JV liquefaction project that could adversely affect our future performance, see "Item 7. MD&A – Factors Influencing Future Performance."

We face many challenges to develop and complete our contemplated LNG export facilities.

In addition to the three-train Cameron LNG liquefaction facility described above, we are looking at several other LNG export terminal development opportunities, including a greenfield project in Port Arthur, Texas, two brownfield projects at our existing ECA regasification facility in Baja California, Mexico (a mid-scale and large-scale project) and an expansion of up to two additional liquefaction trains at the Cameron liquefaction facility. Each of these contemplated projects faces numerous risks and must overcome significant hurdles before we can proceed with construction. Common to all these projects is the risk that global oil prices and their associated current and forward projections could reduce the demand for natural gas in some sectors and cause a corresponding reduction in projected global demand for LNG. This could result in increased competition among those working on projects in an environment of declining LNG demand, such as the Sempra Energy-sponsored export initiatives. Such reduction in natural gas demand could also occur from higher penetration of alternative fuels in new power generation, which could also lead to increased competition among the LNG suppliers for the declining LNG demand. At certain moderate levels, oil prices could also make LNG projects in other parts of the world still feasible and competitive with LNG projects from North America, thus increasing supply and the competition for the available LNG demand. A decline in natural gas prices outside the U.S. (which in many foreign countries are based on the price of crude oil) may also materially adversely affect the relative pricing advantage that has existed in recent years in favor of domestic natural gas prices (based on Henry Hub pricing).

Sempra LNG & Midstream is developing a proposed natural gas liquefaction project near Port Arthur, Texas and is in discussions with the co-owners of Cameron LNG JV regarding the potential expansion of the Cameron LNG JV liquefaction facility. In addition, Sempra LNG & Midstream and IEnova are jointly developing a proposed natural gas liquefaction project at IEnova's existing ECA regasification facility in Mexico.

In June 2018, Sempra LNG & Midstream selected Bechtel as the EPC contractor for the proposed Port Arthur liquefaction project. Bechtel is to perform the engineering, execution planning and related activities necessary to prepare, negotiate and finalize a definitive EPC contract for the project. The current arrangement with Bechtel does not commit any party to enter into a definitive EPC contract or otherwise participate in the project. In December 2018, Polish Oil & Gas Company and Port Arthur LNG entered into a definitive 20-year agreement for the sale and purchase of 2 Mtpa of LNG per year from the Port Arthur LNG liquefaction project. This sale and purchase agreement is subject to conditions precedent, including our positive final investment decision for the Port Arthur liquefaction project.

In November 2018, Sempra Energy and TOTAL S.A. entered into an MOU that provides a framework for cooperation for the development of the potential ECA liquefaction-export project and the potential Cameron LNG expansion project, but does not obligate any of the parties to enter into definitive agreements or participate in the project. The MOU contemplates TOTAL S.A. potentially contracting for up to approximately 9 Mtpa of LNG offtake across these two development projects and provides TOTAL S.A. the option to acquire an equity interest in the proposed ECA LNG liquefaction facility project, though the ultimate participation by TOTAL S.A. remains subject to finalization of definitive agreements, among other factors.

In June 2018, we selected a TechnipFMC plc and Kiewit Corporation partnership as the EPC contractor for the first phase of the potential ECA liquefaction-export project (ECA LNG Phase 1). The TechnipFMC-Kiewit partnership is to perform the engineering, planning and related activities necessary to prepare, negotiate and finalize a definitive EPC contract for ECA LNG Phase 1. The current arrangement with the TechnipFMC-Kiewit partnership does not commit any party to enter into a definitive EPC contract or otherwise participate in the project.

In November 2018, Sempra LNG & Midstream and IEnova signed Heads of Agreements with affiliates of TOTAL S.A., Mitsui & Co., Ltd. and Tokyo Gas Co., Ltd. for ECA LNG Phase 1. We expect ECA LNG Phase 1 to be a single train liquefaction facility located within the existing LNG receipt terminal site with a capacity of approximately 2.4 Mtpa of LNG for export to global markets. Each Heads of Agreement for ECA LNG Phase 1 contemplates the parties negotiating definitive 20-year LNG sales and purchase agreements for the purchase of approximately 0.8 Mtpa of LNG from the ECA LNG facility, but does not obligate the parties to ultimately execute any agreements or participate in the project.

The ultimate participation of TOTAL S.A., Mitsui & Co., Ltd. and Tokyo Gas Co., Ltd. in the potential ECA LNG project as contemplated by the Heads of Agreements remains subject to finalization of definitive agreements, among other factors. The development of the ECA LNG Phase 1 and Phase 2 projects is subject to numerous risks and uncertainties, including obtaining binding customer commitments, the receipt of a number of permits and regulatory approvals; obtaining financing; negotiating and completing suitable commercial agreements, including a definitive EPC contract, equity acquisition and governance agreements, LNG sales agreements and gas supply and transportation agreements; reaching a final investment decision; and other factors associated with this potential investment.

Expansion of the Cameron LNG liquefaction facility beyond the first three trains is subject to certain restrictions and conditions under the joint venture project financing agreements, including among others, timing restrictions on expansion of the project unless appropriate prior consent is obtained from the project lenders. Under the Cameron LNG JV equity agreements, the expansion of the project requires the unanimous consent of all the partners, including with respect to the equity investment obligation of each partner. We expect that discussions on the potential expansion will continue among all the Cameron LNG JV members. There can be no assurance that a mutually agreeable expansion structure will be agreed to unanimously by the Cameron LNG JV members, which if not accomplished in a timely manner, could materially and adversely impact the development of the expansion project. In light of this, we are unable to predict whether or when we and/or Cameron LNG JV might be able to move forward on expansion of the Cameron LNG liquefaction facility beyond the first three trains.

Any decisions by Sempra Energy or our potential counterparties to proceed with binding agreements with respect to the potential development (or expansion) of our liquefaction projects will require, among other things, obtaining customer commitments to purchase LNG, completion of project assessments and achieving other necessary internal and external approvals of each party. In addition, all our proposed projects are subject to a number of risks and uncertainties, including the receipt of a number of permits and approvals; finding suitable partners and customers; obtaining financing and incentives; negotiating and completing suitable commercial agreements, including equity acquisition and governance agreements, natural gas supply and transportation agreements, LNG sale and purchase agreements and construction contracts; and reaching a final investment decision.

Furthermore, there are a number of potential new projects under construction or in the process of development by various project developers in North America, in addition to ours, and given the projected global demand for LNG, the vast majority of these projects likely will not be completed. With respect to our Port Arthur, Texas project, this is a greenfield site, and therefore it may not have the advantages often associated with brownfield sites. The ECA facility in Mexico is subject to on-going land and permit disputes that could make project financing difficult as well as finding suitable partners and customers. In addition, while we have completed the regulatory process for an LNG export facility in the U.S., the regulatory process in Mexico and the overlay of U.S. regulations for natural gas exports to an LNG export facility in Mexico are not well developed. There can be no assurance that such a facility could be permitted and constructed without facing significant legal challenges and uncertainties, which in turn could make project financing, as well as finding suitable partners and customers, difficult. Finally, ECA has profitable long-term regasification contracts for 100 percent of the facility's capacity through 2028, making the decision to pursue a new liquefaction facility dependent in part on whether the investment in a new liquefaction facility would, over the long term, be more beneficial than continuing to supply regasification services under our existing contracts.

There can be no assurance that our contemplated LNG export facilities will be completed, and our inability to complete one or more of our contemplated LNG export facilities could have a material adverse effect on our future cash flows, results of operations and prospects.

We discuss these projects further in "Item 7. MD&A – Factors Influencing Future Performance."

Domestic and international hydraulic fracturing operations are subject to political, economic and other uncertainties that could increase the costs of doing business, impose additional operating restrictions or delays, and adversely affect production of LNG and reduce or eliminate LNG export opportunities and demand.

Hydraulic fracturing operations in the U.S. and outside the U.S. face political and economic risks and other uncertainties with respect to their operations. Several states have adopted or are considering adopting regulations to impose more stringent permitting, public disclosure or well construction requirements on hydraulic fracturing operations. In addition to state laws, some local municipalities have adopted or are considering adopting land use restrictions, such as city ordinances, that may restrict the performance of or prohibit the well drilling in general and/or hydraulic fracturing in particular. Hydraulic fracturing is typically regulated by state oil and natural gas commissions, but federal agencies, including the EPA and the Bureau of Land Management of the U.S. Department of the Interior, have asserted regulatory authority over certain hydraulic fracturing activities. In addition, the U.S. Congress has from time to time considered legislation to provide for federal regulation of hydraulic fracturing under the Safe Drinking Water Act and to require disclosure of the chemicals used in the hydraulic fracturing process. There are also certain governmental reviews that have been conducted or are underway on deep shale and other formation completion and production practices, including hydraulic fracturing. Depending on the outcome of these studies, federal and state legislatures and agencies may seek to further regulate or even ban such activities. Certain environmental and other groups have also suggested that additional federal, state and local laws and regulations may be needed to more closely regulate the hydraulic fracturing process. In addition, hydraulic fracturing operations may also be adversely affected, directly or indirectly, by laws, policies and regulations of the U.S. affecting foreign trade and taxation, including U.S. trade sanctions.

We cannot predict whether additional federal, state, local or international laws or regulations applicable to hydraulic fracturing will be enacted in the future and, if so, what actions any such laws or regulations would require or prohibit. If additional levels of regulation or permitting requirements were imposed on hydraulic fracturing operations, natural gas prices in North America could rise, which in turn could materially adversely affect the relative pricing advantage that has existed in recent years in favor of domestic natural gas prices (based on Henry Hub pricing). Increased regulation or difficulty in permitting of hydraulic fracturing, and any corresponding increase in domestic natural gas prices, could materially adversely affect demand for LNG exports and our ability to develop commercially viable LNG export facilities beyond the three-train Cameron LNG facility currently under construction.

Our businesses are exposed to market risks, including fluctuations in commodity prices, and our businesses, financial condition, results of operations, cash flows and/or prospects may be materially adversely affected by these risks. Energy-related commodity prices impact LNG liquefaction and regasification, the transport and storage of natural gas, and power generation from renewable and conventional sources, among other businesses that we operate and invest in.

We buy energy-related commodities from time to time for LNG terminals or power plants to satisfy contractual obligations with customers, in regional markets and other competitive markets in which we compete. Our revenues and results of operations could be materially adversely affected if the prevailing market prices for natural gas, LNG, electricity or other commodities that we buy change in a direction or manner not anticipated and for which we had not provided adequately through purchase or sale commitments or other hedging transactions.

Unanticipated changes in market prices for energy-related commodities result from multiple factors, including:

- weather conditions;
- seasonality;
- changes in supply and demand;
- transmission or transportation constraints or inefficiencies;
- availability of competitively priced alternative energy sources;
- commodity production levels;
- actions by oil and natural gas producing nations or organizations affecting the global supply of crude oil and natural gas;
- federal, state and foreign energy and environmental regulation and legislation;
- natural disasters, wars, embargoes and other catastrophic events; and
- expropriation of assets by foreign countries.

The FERC has jurisdiction over wholesale power and transmission rates and over independent system operators and other entities that control transmission facilities or that administer wholesale power sales in some of the markets in which we operate. The FERC may impose additional price limitations, bidding rules and other mechanisms, or terminate existing price limitations from time to time. Any such action by the FERC may result in prices for electricity changing in an unanticipated direction or manner and, as a result, may have a material adverse effect on our businesses, cash flows, results of operations and/or prospects.

When our businesses enter into fixed-price long-term contracts to provide services or commodities, they are exposed to inflationary pressures such as rising commodity prices and interest rate risks.

Sempra Mexico and Sempra LNG & Midstream generally endeavor to secure long-term contracts with customers for services and commodities to optimize the use of their facilities, reduce volatility in earnings and support the construction of new infrastructure. However, if these contracts are at fixed prices, the profitability of the contract may be materially adversely affected by inflationary pressures, including rising operational costs, costs of labor, materials, equipment and commodities, and rising interest rates that affect financing costs. We may try to mitigate these risks by using variable pricing tied to market indices, anticipating an escalation in costs when bidding on projects, providing for cost escalation, providing for direct pass-through of operating costs or entering into hedges. However, these measures, if implemented, may not ensure that the increase in revenues they provide will fully offset increases in operating expenses and/or financing costs. The failure to fully or substantially offset these increases could have a material adverse effect on our financial condition, cash flows and/or results of operations.

Increased competition and changes in trade policies could materially adversely affect us.

The markets in which we operate are characterized by numerous strong and capable competitors, many of whom have extensive and diversified development and/or operating experience (including both domestic and international) and financial resources similar to or greater than ours. Further, in recent years, the natural gas pipeline, storage and LNG market segments have been characterized by strong and increasing competition both with respect to winning new development projects and acquiring existing assets. In Mexico, despite the commissioning of many new energy infrastructure projects by the CFE and other governmental agencies in connection with energy reforms, competition for recent pipeline projects has been intense with numerous bidders competing aggressively for these projects. There can be no assurance that we will be successful in bidding for new development opportunities in the U.S., Mexico or South America. In addition, as noted above, there are a number of potential new LNG liquefaction projects under construction or in the process of being developed by various project developers in North America, including our contemplated new projects, and given the projected global demand for LNG, it is likely that most of these projects will not be completed. These competitive factors could have a material adverse effect on our business, results of operations, cash flows and/or prospects.

In addition, the current U.S. Administration has indicated its intention to revise or replace international trade agreements, such as NAFTA. In November 2018, President Trump signed the USMCA, which, if approved by the legislatures of the U.S., Mexico and Canada, would replace NAFTA. A shift in U.S. trade policies could materially adversely affect our LNG development opportunities, as well as opportunities for trade between Mexico and the U.S.

We may elect not to, or may not be able to, enter into, extend or replace expiring long-term supply and sales agreements or long-term firm capacity agreements for our projects, which would subject our revenues to increased volatility and our businesses to increased competition. Such long-term contracts, once entered into, increase our credit risk if our counterparties fail to perform or become unable to meet their contractual obligations on a timely basis due to bankruptcy, insolvency, or otherwise.

The ECA LNG facility has long-term capacity agreements with a limited number of counterparties. Under these agreements, customers pay capacity reservation and usage fees to receive, store and regasify the customers' LNG. We also may enter into short-term and/or long-term supply agreements to purchase LNG to be received, stored and regasified for sale to other parties. The long-term supply agreement contracts are expected to reduce our exposure to changes in natural gas prices through corresponding natural gas sales agreements or by tying LNG supply prices to prevailing natural gas market price indices. If the counterparties, customers or suppliers to one or more of the key agreements for the ECA LNG facility were to fail to perform or become unable to meet their contractual obligations on a timely basis, it could have a material adverse effect on our results of operations, cash flows and/or prospects.

For the three-train liquefaction facility currently under construction, Cameron LNG JV has 20-year liquefaction and regasification tolling capacity agreements in place with affiliates of TOTAL S.A., Mitsubishi Corporation and Mitsui & Co. Ltd., that subscribe for the full nameplate capacity of the facility. If the counterparties to these tolling agreements were to fail to perform or become unable to meet their contractual obligations to Cameron LNG JV on a timely basis, it could have a material adverse effect on our results of operations, cash flows and/or prospects.

Sempra Mexico's and Sempra LNG & Midstream's ability to enter into or replace existing long-term firm capacity agreements for their natural gas pipeline operations are dependent on demand for and supply of LNG and/or natural gas from their transportation customers, which may include our LNG facilities. A significant sustained decrease in demand for and supply of LNG and/or natural gas from such customers could have a material adverse effect on our businesses, results of operations, cash flows and/or prospects.

The electric generation and wholesale power sales industries are highly competitive. As more plants are built and competitive pressures increase, wholesale electricity prices may become more volatile. Without the benefit of long-term power sales agreements, our revenues may be subject to increased price volatility, and we may be unable to sell the power that Sempra Renewables' and Sempra Mexico's facilities are capable of producing or to sell it at favorable prices, which could materially adversely affect our results of operations, cash flows and/or prospects.

Our businesses depend on counterparties, business partners, customers and suppliers performing in accordance with their agreements. If they fail to perform, we could incur substantial expenses and business disruptions and be exposed to commodity price risk and volatility, which could materially adversely affect our businesses, financial condition, cash flows, results of operations and/or prospects.

Our businesses, and the businesses that we invest in, are exposed to the risk that counterparties, business partners, customers and suppliers that owe money or commodities as a result of market transactions or other long-term agreements or arrangements will not perform their obligations in accordance with such agreements or arrangements. Should they fail to perform, we may be required to enter into alternative arrangements or to honor the underlying commitment at then-current market prices. In such an event, we may incur additional losses to the extent of amounts already paid to such counterparties or suppliers. In addition, many such agreements are important for the conduct and growth of our businesses. The failure of any of the parties to perform in accordance with these agreements could materially adversely affect our businesses, results of operations, cash flows, financial condition and/or prospects. Finally, we often extend credit to counterparties and customers. While we perform significant credit analyses prior to extending credit, we are exposed to the risk that we may not be able to collect amounts owed to us.

Sempra Mexico's and Sempra LNG & Midstream's obligations and those of their suppliers for LNG supplies are contractually subject to (1) suspension or termination for "force majeure" events beyond the control of the parties; and (2) substantial limitations of remedies for other failures to perform, including limitations on damages to amounts that could be substantially less than those necessary to provide full recovery of costs for breach of the agreements, which in either event could have a material adverse effect on our results of operations, cash flows, financial condition and/or prospects.

In addition, we may develop and/or own some projects with other equity owners and, therefore, we may not control all material decisions with respect to those projects, as is the case with the Cameron LNG JV project. To the extent that there is disagreement amongst the project equity owners with respect to certain decisions affecting such a project, then the development, construction or operation of such project may be delayed or otherwise materially adversely affected. Such a circumstance could materially adversely affect our business, financial condition, cash flows, result of operations and/or prospects.

Our businesses are subject to various legal actions challenging our property rights and permits.

We are engaged in disputes regarding our title to the properties adjacent to and properties where our ECA LNG regasification terminal in Mexico is located, as we discuss in Note 16 of the Notes to Consolidated Financial Statements. If we are unable to defend and retain title to the properties on which our ECA LNG terminal is located, we could lose our rights to occupy and use such properties and the related terminal, which could result in breaches of one or more permits or contracts that we have entered into with respect to such terminal. In addition, our ability to convert the ECA LNG regasification terminal into an LNG liquefaction export facility may be hindered or halted by these disputes, and they could make project financing such a facility and finding suitable partners and customers very difficult. If we are unable to occupy and use such properties and the related terminal, it could have a material adverse effect on our businesses, financial condition, results of operations, cash flows and/or prospects.

We rely on transportation assets and services, much of which we do not own or control, to deliver electricity and natural gas.

We depend on electric transmission lines, natural gas pipelines and other transportation facilities owned and operated by third parties to:

- deliver the electricity and natural gas we sell to wholesale markets,
- supply natural gas to our gas storage and electric generation facilities, and
- provide retail energy services to customers.

Sempra Mexico and Sempra LNG & Midstream also depend on natural gas pipelines to interconnect with their ultimate source or customers of the commodities they are transporting. Sempra Mexico and Sempra LNG & Midstream also rely on specialized ships to transport LNG to their facilities and on natural gas pipelines to transport natural gas for customers of the facilities. Sempra Renewables, Sempra South American Utilities and Sempra Mexico rely on transmission lines to sell electricity to their customers. If transportation is disrupted, or if capacity is inadequate, we may be unable to sell and deliver our commodities, electricity and other services to some or all of our customers. As a result, we may be responsible for damages incurred by our customers, such as the additional cost of acquiring alternative electricity, natural gas supplies and LNG at then-current spot

market rates, which could have a material adverse effect on our businesses, financial condition, cash flows, results of operations and/or prospects.

Our international businesses are exposed to different local, regulatory and business risks and challenges.

In Mexico, we own or have interests in natural gas distribution and transportation, LPG storage and transportation facilities, ethane transportation assets, electricity generation facilities, and LNG, ethane and liquid fuels marine and inland terminals. In Peru and Chile, we own or have interests in electric transmission, distribution and generation infrastructure and operations. Developing infrastructure projects, owning energy assets and operating businesses in foreign jurisdictions subject us to significant security, political, legal, regulatory and financial risks that vary by country, including:

- changes in foreign laws and regulations, including tax and environmental laws and regulations, and U.S. laws and regulations, in each case, that are related to foreign operations;
- governance by and decisions of local regulatory bodies, including setting of rates and tariffs that may be earned by our businesses;
- adverse changes in market conditions and inadequate enforcement of regulations;
- high rates of inflation;
- volatility in exchange rates between the U.S. dollar and currencies of the countries in which we operate, as we discuss below;
- foreign cash balances that may be unavailable to fund U.S. operations, or available only at unfavorable U.S. and/or foreign tax rates upon repatriation of such amounts or changes in tax law;
- changes in government policies or personnel;
- trade restrictions;
- limitations on U.S. company ownership in foreign countries;
- permitting and regulatory compliance;
- changes in labor supply and labor relations;
- adverse rulings by foreign courts or tribunals, challenges to permits and approvals, difficulty in enforcing contractual and property rights, and unsettled property rights and titles in Mexico and other foreign jurisdictions;
- energy policy reform that may result in adverse changes to and/or difficulty in enforcing existing contracts;
- expropriation of assets;
- destruction of property or assets;
- adverse changes in the stability of the governments in the countries in which we operate;
- general political, social, economic and business conditions;
- compliance with the Foreign Corrupt Practices Act and similar laws;
- valuation of goodwill; and
- theft of assets.

Our international businesses also are subject to foreign currency risks. These risks arise from both volatility in foreign currency exchange and inflation rates and devaluations of foreign currencies. In such cases, an appreciation of the U.S. dollar against a local currency could materially reduce the amount of cash and income received from those foreign subsidiaries. We may or may not choose to hedge these risks, and any hedges entered into may or may not be effective. Fluctuations in foreign currency exchange and inflation rates may result in significantly increased taxes in foreign countries and materially adversely affect our cash flows, financial condition, results of operations and/or prospects.

We discuss litigation related to Sempra Mexico's international energy projects in Note 16 of the Notes to Consolidated Financial Statements.

Risks Related to Our Interest in Oncor

Sempra Energy could incur substantial tax liabilities if EFH's 2016 spin-off of Vistra from EFH is deemed to be taxable.

As part of its ongoing bankruptcy proceedings, in 2016 EFH distributed all the outstanding shares of common stock of its subsidiary Vistra Energy Corp. (formerly TCEH Corp. and referred to herein as Vistra) to certain creditors of TCEH LLC (the spinoff), and Vistra became an independent, publicly traded company. Vistra's spin-off from EFH was intended to qualify for partially tax-free treatment to EFH and its stockholders under Sections 368(a)(1)(G), 355 and 356 of the IRC (collectively referred to as the Intended Tax Treatment). In connection with and as a condition to the spin-off, EFH received a private letter ruling from the IRS regarding certain issues relating to the Intended Tax Treatment of the spin-off, as well as tax opinions from counsel to EFH and Vistra regarding certain aspects of the spin-off not covered by the private letter ruling.

In connection with the signing and closing of the Merger, EFH sought and received a supplemental private letter ruling from the IRS and Sempra Energy and EFH received tax opinions from their respective counsel that generally provide that the Merger will not affect the conclusions reached in, respectively, the IRS private letter ruling and tax opinions issued with respect to the spin-off described above. Similar to the IRS private letter ruling and opinions issued with respect to the spin-off, the supplemental private letter ruling is generally binding on the IRS and any opinions issued with respect to the Merger are based on factual representations and assumptions, as well as certain undertakings, made by Sempra Energy and EFH, now Sempra Texas Holdings Corp. and a subsidiary of Sempra Energy. If such representations and assumptions are untrue or incomplete, any such undertakings are not complied with, or the facts upon which the IRS supplemental private letter ruling or tax opinions (which will not impact the IRS position on the transactions) are based are different from the actual facts relating to the Merger, the tax opinions and/or supplemental private letter ruling may not be valid and as a result, could be successfully challenged by the IRS. If it is determined that the Merger causes the spin-off not to qualify for the Intended Tax Treatment, Sempra Energy, through its ownership of Sempra Texas Holdings Corp., could incur substantial tax liabilities, which would materially reduce and potentially eliminate the value associated with our indirect investment in Oncor and could have a material adverse effect on the results of operations, financial condition and/or prospects of Sempra Energy and on the market value of our common stock, preferred stock and debt securities. Should the IRS invalidate the private letter ruling and/or the supplemental private letter ruling, Sempra Texas Holdings Corp. has administrative appeal rights including the right to challenge any adverse IRS position in court.

Failure by Oncor to successfully execute its business strategy and objectives may materially adversely affect Sempra Energy's future results and, consequently, the market value of our common stock, preferred stock and debt securities.

The success of the Merger will depend, in part, on the ability of Oncor to successfully execute its business strategy, including several objectives that are capital intensive, and to respond to challenges in the electric utility industry. See below under "Oncor's operations are capital intensive and it could have liquidity needs that may require us to make additional investments in Oncor." If Oncor is not able to achieve these objectives, is not able to achieve these objectives on a timely basis, or otherwise fails to perform in accordance with our expectations, the anticipated benefits of the Merger may not be realized fully or at all and the Merger may materially adversely affect Sempra Energy's results of operations, financial condition and prospects of Sempra Energy and, consequently, the market value of our common stock, preferred stock and debt securities.

We may issue a significant amount of equity securities to reduce our indebtedness incurred in connection with the Merger, which may dilute the economic and voting interests of our current shareholders and may adversely affect the market value of our common stock and preferred stock.

In 2018, we issued a significant amount of equity securities to raise proceeds to fund a significant portion of the Merger Consideration and associated transaction costs and to reduce our indebtedness. As of February 26, 2019, 16,906,185 shares remain subject to future settlement under forward sale agreements, which may be settled on one or more dates specified by us occurring no later than December 15, 2019, which is the final settlement date under the agreements. Although we expect to settle the forward sale agreements entirely by the physical delivery of shares of our common stock in exchange for cash proceeds, we may, subject to certain conditions, elect cash settlement or net share settlement for all or a portion of our obligations under the forward sale agreements. The forward sale agreements are also subject to acceleration by the forward purchasers upon the occurrence of certain events.

In addition, in January 2018, we issued 17,250,000 shares of our 6% mandatory convertible preferred stock, series A (the "series A preferred stock"), and in July 2018, we issued 5,750,000 shares of our 6.75% mandatory convertible preferred stock, series B (the "series B preferred stock"), both of which we expect will ultimately convert into common stock. Some of these equity issuances, including common stock issued upon settlement of the forward sale agreements, will likely occur in connection with the repayment of outstanding indebtedness, including indebtedness we have incurred in connection with the Merger. See below under "We incurred significant indebtedness in connection with the Merger. As a result, it may be more difficult for us to pay or refinance our debts or take other actions, and we may need to divert cash to fund debt service payments." Although the issuance of any equity securities is subject to market conditions and other factors, many of which are beyond our control, and we may in fact issue fewer shares of any equity securities than anticipated, the issuance of a substantial number of additional shares of our common stock (including shares issued upon conversion of our mandatory convertible preferred stock and settlement of the forward sale agreements) will have the effect, and the issuance of additional equity securities may have the effect, of diluting the economic and voting interests of our common shareholders. In addition, the issuance of additional shares of common stock (including shares issued upon conversion of our mandatory convertible preferred stock and settlement of the forward sale agreements) without a commensurate increase in our consolidated earnings would dilute, and the issuance of additional equity securities could dilute, our earnings per common share. Any of the foregoing may have a material adverse effect on the market value of our common stock.

We incurred significant indebtedness in connection with the Merger. As a result, it may be more difficult for us to pay or refinance our debts or take other actions, and we may need to divert cash to fund debt service payments.

We incurred significant additional indebtedness to finance a portion of the Merger Consideration and associated transaction costs. In January 2018, we issued \$5 billion aggregate principal amount of fixed- and variable-rate notes in various series that mature between 2019 and 2048, and we issued approximately \$2.6 billion of commercial paper in February 2018 and March 2018 (the Oncor Merger Commercial Paper) to fund a portion of the Merger Consideration and associated transaction costs. We have since repaid the Oncor Merger Commercial Paper with proceeds from equity issuances and newly issued commercial paper. Our debt service obligations resulting from our aggregate indebtedness could have a material adverse effect on Sempra Energy's results of operations, financial condition and prospects by, among other things:

- making it more difficult and/or costly for us to pay or refinance our debts as they become due, particularly during adverse economic and industry conditions, because a decrease in revenues or increase in costs could cause cash flow from operations to be insufficient to make scheduled debt service payments;
- limiting our flexibility to pursue other strategic opportunities or react to changes in our business and the industry sectors in which we operate and, consequently, put us at a competitive disadvantage to our competitors that have less debt;
- requiring a substantial portion of our available cash to be used for debt service payments, thereby reducing the availability of our cash to fund working capital, capital expenditures, development projects, acquisitions, dividend payments and other general corporate purposes, which could hinder our prospects for growth and the market price of our common stock, preferred stock and debt securities, among other things;
- making it more difficult for us to raise capital to fund working capital, make capital expenditures, pay dividends, pursue strategic initiatives or for other purposes;
- imposing higher interest expense in the event of increases in interest rates on our current or future borrowings subject to variable rates of interest;
- requiring that additional materially adverse terms, conditions or covenants be placed on us under our debt instruments, which covenants might include, for example, limitations on additional borrowings; and
- imposing specific restrictions on uses of our assets, as well as prohibitions or limitations on our ability to create liens, pay dividends, receive distributions from our subsidiaries, redeem or repurchase our stock or make investments, any of which could hinder our access to capital markets and limit or delay our ability to carry out our capital expenditure program.

The Merger substantially increased our debt service obligations and in light of the ring-fencing arrangements described below under "Certain ring-fencing measures, existing governance mechanisms and commitments limit our ability to influence the management and policies of Oncor," there can be no assurance that we will receive any cash from Oncor to assist us in servicing our indebtedness, paying dividends on our common stock and mandatory convertible preferred stock or meeting our other cash needs, which may have a material adverse effect on Sempra Energy's cash flows, financial condition, results of operations and/or prospects.

We are committed to maintaining our credit ratings at investment grade. To maintain these credit ratings, we may consider it appropriate to reduce the amount of our outstanding indebtedness. We may seek to reduce this indebtedness with the proceeds from the issuance of additional shares of common stock and, possibly, other equity securities, and the settlement of sales of our common stock pursuant to our forward sale agreements, cash from operations and proceeds from asset sales, which may dilute the voting rights and economic interests of holders of our common stock. However, the issuance of any equity securities is subject to market conditions and other factors, many of which are beyond our control. There can be no assurance that we will be able to issue additional shares of our common stock or other equity securities on terms that we consider acceptable or at all, or that we will be able to reduce the amount of our outstanding indebtedness, should we elect to do so, to a level that permits us to maintain our investment grade credit ratings, which may have a material adverse effect on Sempra Energy's cash flows, financial condition, results of operations and/or prospects.

Certain ring-fencing measures, governance mechanisms and commitments limit our ability to influence the management and policies of Oncor.

Various "ring-fencing" measures are in place to enhance Oncor's separateness from its owners and to mitigate the risk that Oncor would be negatively impacted in the event of a bankruptcy or other adverse financial developments affecting its owners. This ring-fence creates both legal and financial separation between Oncor Holdings, Oncor and their subsidiaries, on the one hand, and Sempra Energy and its affiliates and subsidiaries, on the other hand.

In accordance with the ring-fencing measures, governance mechanisms and commitments we made in connection with the Merger, we and Oncor are subject to various restrictions, including, among others:

- The board of directors of Oncor will consist of thirteen members, seven of which will be independent directors in all material respects under the rules of the New York Stock Exchange in relation to Sempra Energy and its subsidiaries and affiliated entities and any entity with a direct or indirect ownership interest in Oncor or Oncor Holdings (and those directors must have no material relationship with Sempra Energy or its affiliates, or any other entity with a direct or indirect ownership interest in Oncor or Oncor Holdings, currently or within the previous 10 years), two of which will be designated by Sempra Energy, two of which will be appointed by Oncor's minority owner, TTI, which is an investment vehicle owned by third parties unaffiliated with Sempra Energy and that owns approximately 19.75 percent of the outstanding membership interests in Oncor, and two of which will be current or former officers of Oncor;
- A majority of the independent directors of Oncor must approve any annual or multi-year budget if the aggregate amount of capital expenditures or O&M in such budget is more than a 10-percent increase or decrease from the corresponding amounts of such expenditures in the budget for the preceding fiscal year or multi-year period, as applicable;
- Oncor shall make minimum aggregate capital expenditures equal to at least \$7.5 billion over the period from January 1, 2018 through December 31, 2022 (subject to certain possible adjustments);
- Oncor may not pay any dividends or make any other distributions (except for contractual tax payments) if a majority of its independent directors or a minority member director determines that it is in the best interests of Oncor to retain such amounts to meet expected future requirements;
- At all times, Oncor will remain in compliance with the debt-to-equity ratio established by the PUCT from time to time for ratemaking purposes, and Oncor will not pay dividends or other distributions (except for contractual tax payments), if that payment would cause its debt-to-equity ratio to exceed the debt-to-equity ratio approved by the PUCT;
- If the credit rating on Oncor's senior secured debt by any of the three major rating agencies falls below BBB (or the equivalent), Oncor will suspend dividends and other distributions (except for contractual tax payments), unless otherwise allowed by the PUCT;
- Without the prior approval of the PUCT, neither Sempra Energy nor any of its affiliates (excluding Oncor) will incur, guarantee or pledge assets in respect of any indebtedness that is dependent on the revenues of Oncor in more than a proportionate degree than the other revenues of Sempra Energy or on the stock of Oncor, and there will be no debt at Sempra Texas Holdings Corp. or Sempra Texas Intermediate Holding Company LLC at any time;
- Neither Oncor nor Oncor Holdings will lend money to or borrow money from Sempra Energy or any of its affiliates (other than Oncor subsidiaries), or any entity with a direct or indirect ownership interest in Oncor Holdings or Oncor, and neither Oncor Holdings nor Oncor will share credit facilities with Sempra Energy or any of its affiliates (other than Oncor subsidiaries), or any entity with a direct or indirect ownership interest in Oncor Holdings or Oncor;
- Oncor will not seek recovery in rates of any expenses or liabilities related to EFH's bankruptcy, or (1) any tax liabilities resulting from EFH's spinoff of its former subsidiary Texas Competitive Electric Holdings Company LLC, (2) any asbestos claims relating to non-Oncor operations of EFH or (3) any make-whole claims by holders of debt securities issued by EFH or EFIH, and Sempra Energy was required to and has filed with the PUCT a plan providing for the extinguishment of the liabilities described in items (1) through (3) above, which protects Oncor from any harm;
- There must be maintained certain "separateness measures" that reinforce the financial separation of Oncor from Sempra Energy, including a requirement that dealings between Oncor, Oncor Holdings and their subsidiaries and Sempra Energy, any of Sempra Energy's other affiliates or any entity with a direct or indirect ownership interest in Oncor Holdings or Oncor, must be on an arm's-length basis, limitations on affiliate transactions, separate recordkeeping requirements and a prohibition on pledging Oncor assets or stock for any entity other than Oncor;
- No transaction costs or transition costs related to the Merger (excluding Oncor employee time) will be borne by Oncor's customers nor included in Oncor's rates;
- Sempra Energy will continue to hold indirectly at least 51 percent of the ownership interests in Oncor Holdings and Oncor for at least five years following the closing of the Merger, unless otherwise specifically authorized by the PUCT; and
- Oncor will provide bill credits to customers in an amount equal to 90 percent of any interest rate savings achieved due to any improvement in its credit ratings or market spreads compared to those as of June 30, 2017 until final rates are set in the next Oncor base rate case filed after PUCT Docket No. 46957 (except that savings will not be included in credits if already realized in rates); and one year after the Merger, Oncor will present a merger-synergy savings analysis to the PUCT and provide bill credits to its customers equal to 90 percent of any synergy savings until final rates are set in the next Oncor base rate proceeding after PUCT Docket No. 46957, at which time any total synergy savings shall be reflected in Oncor's rates. On September 7, 2018, Oncor filed its first semi-annual interest rate savings compliance report with the PUCT and began accruing a bill credit upon the issuance of its new debt in August 2018.

As a result of the ring-fencing measures, governance mechanisms and commitments, we do not control Oncor Holdings or Oncor, and we have limited ability to direct the management, policies and operations of Oncor Holdings and Oncor, including the deployment or disposition of their assets, declarations of dividends, strategic planning and other important corporate issues and actions. We have limited representation on the Oncor Holdings and Oncor board of directors, which are controlled by independent

directors. The existence of the ring-fencing measures and other limitations may increase our costs of financing. Further, the Oncor directors have considerable autonomy and, as described in our commitments, have a duty to act in the best interest of Oncor consistent with the approved ring-fence and Delaware law, which may be contrary to our best interests or be in opposition to our preferred strategic direction for Oncor. To the extent that they take actions that are not in our interests, the financial condition, results of operations and/or prospects of Sempra Energy may be materially adversely affected.

If Oncor fails to respond to challenges in the electric utility industry, including changes in regulation, its results of operations and financial condition could be adversely affected, and this could materially adversely affect us.

Because Oncor is regulated by both U.S. federal and Texas state authorities, it has been and will continue to be affected by legislative and regulatory developments. The costs and burdens associated with complying with these regulatory requirements and adjusting Oncor's business to legislative and regulatory developments may have a material adverse effect on Oncor. Moreover, potential legislative changes, regulatory changes or other market or industry changes may create greater risks to the predictability of utility earnings generally. If Oncor does not successfully respond to these changes, it could suffer a deterioration in its results of operations, financial condition and/or prospects, which could materially adversely affect our results of operations, financial condition and/or prospects.

Oncor's operations are capital intensive and it could have liquidity needs that may require us to make additional investments in Oncor.

Oncor's business is capital intensive, and it relies on external financing as a significant source of liquidity for its capital requirements. In the past, Oncor has financed a substantial portion of its cash needs with the proceeds from indebtedness. In the event that Oncor fails to meet its capital requirements, we may be required to make additional investments in Oncor. Similarly, if Oncor is unable to access sufficient capital to finance its ongoing needs, we may elect to make additional investments in Oncor which could be substantial and which would reduce the cash available to us for other purposes, could increase our indebtedness and could ultimately materially adversely affect our results of operations, financial condition and/or prospects. In that regard, our commitments to the PUCT prohibit us from making loans to Oncor. As a result, if Oncor requires additional financing and cannot obtain it from other sources, we may be required to make a capital contribution, rather than a loan, to Oncor.

Settlement provisions contained in our equity forward sale agreements subject us to certain risks.

The counterparties to the January forward sale agreements and the July forward sale agreements (collectively, the forward purchasers) have the right to accelerate their respective forward sale agreements (or, in certain cases, the portion thereof that they determine is affected by the relevant event) and require us to physically settle such forward sale agreements on a date specified by the forward purchasers if:

- they are unable to establish, maintain or unwind their hedge position with respect to the forward sale agreements;
- they determine that they are unable to, or it is commercially impracticable for them to, continue to borrow a number of shares of our common stock equal to the number of shares of our common stock underlying the forward sale agreements or that, with respect to borrowing such number of shares of our common stock, they would incur a rate that is greater than the borrow cost specified in the forward sale agreements, subject to a prior notice requirement;
- we declare or pay cash dividends on shares of our common stock in an amount in excess of amounts, or at a time before, those prescribed by the forward sale agreements or declare or pay certain other types of dividends or distributions on shares of our common stock;
- an event is announced that, if consummated, would result in an extraordinary event (including certain mergers and tender offers, our nationalization, our insolvency and the delisting of the shares of our common stock);
- an ownership event (as such term is defined in the forward sale agreements) occurs; or
- certain other events of default, termination events or other specified events occur, including, among other things, a change in law.

The forward purchasers' decision to exercise their right to accelerate the forward sale agreements (or, in certain cases, the portion thereof that they determine is affected by the relevant event) and to require us to settle the forward sale agreements will be made irrespective of our interests, including our need for capital. In such cases, we could be required to issue and deliver our common stock under the terms of the physical settlement provisions of the forward sale agreements irrespective of our capital needs, which would result in dilution to our EPS and may adversely affect the market price of our common stock, our mandatory convertible preferred stock, any other equity that we may issue and our debt securities.

The forward sale agreements provide for settlement on a settlement date or dates to be specified at our discretion, but which we expect to occur in one or more additional settlements on or prior to December 15, 2019. Subject to the provisions of the forward sale agreements, delivery of our shares upon physical or net share settlement of the forward sale agreements will result in dilution

to our EPS and may adversely affect the market price of our common stock, mandatory convertible preferred stock and any other equity that we may issue.

We may elect, subject to certain conditions, cash settlement or net share settlement for all or a portion of our obligations under the forward sale agreements if we conclude that it is in our interest to do so. For example, we may conclude that it is in our interest to cash settle or net share settle the forward sale agreements if we otherwise have no current use for all or a portion of the net proceeds due upon physical settlement of the forward sale agreements.

If we elect to cash or net share settle all or a portion of the shares of our common stock underlying the forward sale agreements, we would expect the forward purchasers or one of their affiliates to purchase the number of shares necessary, based on the number of shares with respect to which we have elected cash or net share settlement, in order to satisfy their obligation to return the shares of our common stock they had borrowed in connection with sales of our common stock related to each underlying stock offering and, if applicable in connection with net share settlement, to deliver shares of our common stock to us or take into account shares of our common stock to be delivered by us, as applicable. The purchase of our common stock by the forward purchasers or their affiliates to unwind the forward purchasers' hedge positions could cause the price of our common stock to increase over time, thereby increasing the amount of cash or the number of shares of our common stock that we would owe to the forward purchasers upon cash settlement or net share settlement, as the case may be, of the forward sale agreements, or decreasing the amount of cash or the number of shares of our common stock that the forward purchasers owe us upon cash settlement or net share settlement, as the case may be, of the forward sale agreements.

Dividend requirements associated with the mandatory convertible preferred stock Sempra Energy issued in connection with the Merger subject us to certain risks.

Any future payments of cash dividends, and the amount of any cash dividends we pay, on our series A preferred stock and our series B preferred stock will depend on, among other things, our financial condition, capital requirements and results of operations, and the ability of our subsidiaries and investments to distribute cash to us, as well as other factors that our board of directors (or an authorized committee thereof) may consider relevant. Any failure to pay scheduled dividends on our mandatory convertible preferred stock when due would likely have a material adverse impact on the market price of our mandatory convertible preferred stock, our common stock and our debt securities and would prohibit us, under the terms of the mandatory convertible preferred stock, from paying cash dividends on or repurchasing shares of our common stock (subject to limited exceptions) until such time as we have paid all accumulated and unpaid dividends on the mandatory convertible preferred stock.

The terms of the series A preferred stock and series B preferred stock provide that if dividends on any shares of the mandatory convertible preferred stock (i) have not been declared and paid, or (ii) have been declared but a sum of cash or number of shares of our common stock sufficient for payment thereof has not been set aside for the benefit of the holders thereof on the applicable record date, in each case, for the equivalent of six or more dividend periods, whether or not for consecutive dividend periods, the holders of shares of mandatory convertible preferred stock, voting together as a single class with holders of any and all other classes or series of our preferred stock ranking equally with the mandatory convertible preferred stock either as to dividends or the distribution of assets upon liquidation, dissolution or winding-up and having similar voting rights, will be entitled to elect a total of two additional members of our board of directors, subject to certain terms and limitations described in the certificate of determination applicable to the mandatory convertible preferred stock.

Other Risks

Sempra Energy has substantial investments in and obligations arising from businesses that it does not control or manage or in which it shares control.

Sempra Energy makes investments in entities that we do not control or manage or in which we share control. As described above, SDG&E holds a 20-percent ownership interest in SONGS, which is in the process of being decommissioned by Edison, its majority owner. As a result of ring-fencing measures, existing governance mechanisms and commitments, we account for our indirect, 100-percent ownership interest in Oncor Holdings, which owns an 80.25 percent interest in Oncor, as an equity method investment, which investment is \$9,652 million at December 31, 2018. Sempra LNG & Midstream accounts for its investment in the Cameron LNG JV under the equity method, which investment is \$1,271 million at December 31, 2018. At December 31, 2018, Sempra Renewables had investments totaling \$291 million in several JVs to operate wind generation facilities. Sempra Mexico has a 40-percent interest in a JV with a subsidiary of TransCanada to build, own and operate the Sur de Texas-Tuxpan natural gas marine pipeline in Mexico, a 50-percent interest in a renewables wind project in Baja California, and a 50-percent interest in the Los Ramones Norte pipeline in Mexico. At December 31, 2018, these various JV investments by Sempra Mexico totaled \$747 million. Sempra Energy has an equity method investment in the RBS Sempra Commodities partnership which is in the process of being dissolved and for which Sempra Energy is subject to certain indemnities as we discuss in Note 16 of the

Notes to Consolidated Financial Statements. Any adverse resolution of matters associated with our remaining investment in the RBS Sempra Commodities partnership could have a corresponding impact on our cash flows, financial condition and results of operations.

Sempra Energy committed to make a capital contribution to Oncor for Oncor to fund its acquisition of InfraREIT, which acquisition we expect will close in mid-2019. We estimate the capital contribution to be \$1,025 million, excluding our share of the approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition. The capital contribution is contingent on the satisfaction of customary conditions, including the substantially simultaneous closing of the transactions contemplated by the InfraREIT Merger Agreement. We discuss these transactions in Note 5 of the Notes to Consolidated Financial Statements and in “Item 7. MD&A – Factors Influencing Future Performance.”

Sempra Mexico and Sempra LNG & Midstream have provided guarantees related to JV financing agreements, and Sempra South American Utilities and Sempra Mexico have provided loans to JVs in which they have investments and to other affiliates. We discuss the guarantees in Note 6 and affiliate loans in Note 1 of the Notes to Consolidated Financial Statements.

We have limited influence over these ventures and other businesses in which we do not have a controlling interest. In addition to the other risks inherent in these businesses, if their management were to fail to perform adequately or the other investors in the businesses were unable or otherwise failed to perform their obligations to provide capital and credit support for these businesses, it could have a material adverse effect on our results of operations, financial condition, cash flows and/or prospects. We discuss our investments further in Notes 5, 6 and 12 of the Notes to Consolidated Financial Statements.

Market performance or changes in other assumptions could require Sempra Energy, SDG&E and/or SoCalGas to make significant unplanned contributions to their pension and other postretirement benefit plans.

Sempra Energy, SDG&E and SoCalGas provide defined benefit pension plans and other postretirement benefits to eligible employees and retirees. A decline in the market value of plan assets may increase the funding requirements for these plans. In addition, the cost of providing pension and other postretirement benefits is also affected by other factors, including the assumed rate of return on plan assets, employee demographics, discount rates used in determining future benefit obligations, rates of increase in health care costs, levels of assumed interest rates and future governmental regulation. An adverse change in any of these factors could cause a material increase in our funding obligations which could have a material adverse effect on our results of operations, financial condition, cash flows and/or prospects.

Impairment of goodwill would negatively impact our consolidated results of operations and net worth.

As of December 31, 2018, Sempra Energy had approximately \$2.4 billion of goodwill, which represented approximately 3.9 percent of the total assets on its Consolidated Balance Sheet, primarily related to the acquisitions of IEnova Pipelines and Ventika in Mexico, Chilquinta Energía in Chile and Luz Del Sur in Peru. Goodwill is not amortized, but we test it for impairment annually on October 1 or whenever events or changes in circumstances necessitate an evaluation, which could result in our recording a goodwill impairment loss. We discuss our annual goodwill impairment testing process and the factors considered in such testing in “Item 7. MD&A – Critical Accounting Policies and Estimates” and in Note 1 of the Notes to Consolidated Financial Statements. A goodwill impairment loss could materially adversely affect our results of operations for the period in which such charge is recorded.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We discuss properties related to our electric, natural gas and energy infrastructure operations in “Item 1. Business” and Note 1 of the Notes to Consolidated Financial Statements.

OTHER PROPERTIES

Sempra Energy occupies its 16-story corporate headquarters building in San Diego, California, pursuant to a 25-year lease that expires in 2040. The lease has five five-year renewal options. We discuss the details of this lease further in Notes 2 and 16 of the Notes to Consolidated Financial Statements.

SoCalGas leases approximately one-fourth of a 52-story office building in downtown Los Angeles, California, pursuant to an operating lease expiring in 2026. The lease has four five-year renewal options.

SDG&E occupies a six-building office complex in San Diego, California, pursuant to two separate operating leases, both ending in 2024. One lease has two five-year renewal options and the other lease has three five-year renewal options.

Sempra South American Utilities owns or leases office facilities at various locations in Chile and Peru, with the leases ending from 2021 to 2027. Sempra Global owns or leases office facilities at various locations in the U.S. and Mexico, with the leases ending from 2019 to 2027.

We own or lease other land, warehouses, offices, operating and maintenance centers, shops, service facilities and equipment necessary to conduct our businesses.

ITEM 3. LEGAL PROCEEDINGS

We are not party to, and our property is not the subject of, any material pending legal proceedings (other than ordinary routine litigation incidental to our businesses) except for the matters (1) described in Notes 15 and 16 of the Notes to Consolidated Financial Statements, (2) referred to in “Item 1A. Risk Factors” or (3) referred to in “Item 7. MD&A – Factors Influencing Future Performance.”

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II.

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET INFORMATION

Sempra Energy Common Stock

Our common stock is traded on the New York Stock Exchange under the ticker symbol SRE.

SEMPRA ENERGY EQUITY COMPENSATION PLANS

Sempra Energy has a long-term incentive plan that permits the grant of a wide variety of equity and equity-based incentive awards to directors, officers and key employees. At December 31, 2018, outstanding awards consisted of stock options and RSUs held by 446 employees.

The following table sets forth information regarding our equity compensation plan at December 31, 2018.

EQUITY COMPENSATION PLAN

	Number of shares to be issued upon exercise of outstanding options, warrants and rights ⁽¹⁾	Weighted-average exercise price of outstanding options, warrants and rights ⁽²⁾	Number of additional shares remaining available for future issuance ⁽³⁾
Equity compensation plan approved by shareholders: 2013 Long-Term Incentive Plan	1,701,470	\$ 54.63	6,067,767

⁽¹⁾ Consists of 56,940 options to purchase shares of our common stock, all of which were granted at an exercise price equal to 100 percent of the grant date fair market value of the shares subject to the option, 1,242,169 performance-based RSUs and 402,361 service-based RSUs. Each performance-based RSU represents the right to receive from zero to 2.0 shares of our common stock if applicable performance conditions are satisfied. The 1,701,470 shares also include awards granted under two previously shareholder-approved long-term incentive plans (Predecessor Plans). No new awards may be granted under these Predecessor Plans.

⁽²⁾ Represents only the weighted-average exercise price of the 56,940 outstanding options to purchase shares of common stock.

⁽³⁾ The number of shares available for future issuance is increased by the number of shares to which the participant would otherwise be entitled that are withheld or surrendered to satisfy the exercise price or to satisfy tax withholding obligations relating to any plan awards, and is also increased by the number of shares subject to awards that expire or are forfeited, canceled or otherwise terminated without the issuance of shares.

We provide additional discussion of share-based compensation in Note 10 of the Notes to Consolidated Financial Statements.

PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

On September 11, 2007, the Sempra Energy board of directors authorized the repurchase of Sempra Energy common stock provided that the amounts spent for such purpose do not exceed the greater of \$2 billion or amounts spent to purchase no more than 40 million shares. No shares have been repurchased under this authorization since 2011. Approximately \$500 million remains authorized by our board of directors for the purchase of additional shares, not to exceed approximately 12 million shares.

We also may, from time to time, purchase shares of our common stock to which participants would otherwise be entitled from long-term incentive plan participants who elect to sell a sufficient number of shares in connection with the vesting of RSUs in order to satisfy minimum statutory tax withholding requirements.

ITEM 6. SELECTED FINANCIAL DATA

FIVE-YEAR SUMMARIES

The following tables present selected financial data of Sempra Energy, SDG&E and SoCalGas for the five years ended December 31, 2018. The data is derived from the audited consolidated financial statements of each company. You should read this information in conjunction with “Item 7. MD&A” and the consolidated financial statements and notes contained in this annual report on Form 10-K.

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA – SEMPRA ENERGY CONSOLIDATED

(In millions, except per share amounts)

	At December 31 or for the years then ended				
	2018	2017	2016	2015	2014
Revenues:					
Utilities					
Electric	\$ 5,506	\$ 5,415	\$ 5,211	\$ 5,158	\$ 5,209
Natural gas	4,540	4,361	4,050	4,096	4,549
Energy-related businesses	1,641	1,431	922	977	1,277
Total revenues	\$ 11,687	\$ 11,207	\$ 10,183	\$ 10,231	\$ 11,035
Income from continuing operations	\$ 1,126	\$ 351	\$ 1,519	\$ 1,448	\$ 1,262
Earnings from continuing operations					
attributable to noncontrolling interests	(76)	(94)	(148)	(98)	(100)
Mandatory convertible preferred stock dividends	(125)	—	—	—	—
Preferred dividends of subsidiary	(1)	(1)	(1)	(1)	(1)
Earnings/Income from continuing operations					
attributable to common shares	\$ 924	\$ 256	\$ 1,370	\$ 1,349	\$ 1,161
Attributable to common shares:					
Earnings/Income from continuing operations					
Basic	\$ 3.45	\$ 1.02	\$ 5.48	\$ 5.43	\$ 4.72
Diluted	\$ 3.42	\$ 1.01	\$ 5.46	\$ 5.37	\$ 4.63
Dividends declared per common share	\$ 3.58	\$ 3.29	\$ 3.02	\$ 2.80	\$ 2.64
Effective income tax rate	12%	81%	21%	20%	20%
Weighted-average rate base:					
SDG&E	\$ 9,619	\$ 8,549	\$ 8,019	\$ 7,671	\$ 7,253
SoCalGas	\$ 6,413	\$ 5,493	\$ 4,775	\$ 4,269	\$ 3,879
AT DECEMBER 31					
Current assets	\$ 3,645	\$ 3,341	\$ 3,110	\$ 2,891	\$ 4,184
Total assets	\$ 60,638	\$ 50,454	\$ 47,786	\$ 41,150	\$ 39,651
Current liabilities	\$ 7,523	\$ 6,635	\$ 5,927	\$ 4,612	\$ 5,069
Long-term debt (excludes current portion) ⁽¹⁾	\$ 21,611	\$ 16,445	\$ 14,429	\$ 13,134	\$ 12,086
Short-term debt ⁽²⁾	\$ 3,752	\$ 2,967	\$ 2,692	\$ 1,529	\$ 2,202
Sempra Energy shareholders' equity	\$ 17,138	\$ 12,670	\$ 12,951	\$ 11,809	\$ 11,326
Common shares outstanding	273.8	251.4	250.2	248.3	246.3
Book value per common share	\$ 54.35	\$ 50.40	\$ 51.77	\$ 47.56	\$ 45.98

⁽¹⁾ Includes capital lease obligations.

⁽²⁾ Includes long-term debt due within one year and current portion of capital lease obligations.

In 2018, we recorded impairment charges of \$1.1 billion (\$629 million after tax and NCI) at Sempra LNG & Midstream, \$200 million (\$145 million after tax) at Sempra Renewables and \$65 million at Parent and other. We discuss the impairments in Notes 5, 6 and 12 of the Notes to Consolidated Financial Statements.

In 2018, we completed the sale of our U.S. operating solar assets, solar and battery storage development projects, as well as an interest in one wind facility, and recognized a pretax gain on sale of \$513 million (\$367 million after tax). We discuss the sale and related gain in Note 5 of the Notes to Consolidated Financial Statements.

In 2018, Sempra Energy completed registered public offerings of our common stock (including shares offered pursuant to forward sale agreements), series A preferred stock, series B preferred stock and long-term debt. These offerings, including settlement of a portion of the forward sale agreements, provided total net proceeds of approximately \$4.5 billion in equity and \$4.9 billion in debt. A portion of these proceeds were used to partially fund the acquisition of an indirect, 100-percent interest in Oncor Holdings, which we account for as an equity method investment. We discuss the acquisition and equity method investment further in Notes 5 and 6 of the Notes to Consolidated Financial Statements.

In 2017, Sempra Energy's income tax expense included \$870 million related to the impact of the TCJA, as we discuss in Note 8 of the Notes to Consolidated Financial Statements and in "Item 7. MD&A – Income Taxes."

In 2017, we recorded a charge of \$208 million (after tax) for the write-off of SDG&E's wildfire regulatory asset, which we discuss in Note 16 of the Notes to Consolidated Financial Statements.

In 2017 and 2016, Sempra Mexico recognized impairment charges of \$47 million (after NCI) and \$90 million (after tax and NCI), respectively, related to assets held for sale at TdM. We discuss the impairments in Notes 5 and 12 of the Notes to Consolidated Financial Statements.

In 2016, we recorded a \$350 million (after tax and NCI) noncash gain associated with the remeasurement of Sempra Mexico's equity interest in IEnova Pipelines (formerly known as GdC).

In 2016, IEnova completed a private offering in the U.S. and outside of Mexico and a concurrent public offering in Mexico of common stock.

We discuss litigation and other contingencies in Note 16 of the Notes to Consolidated Financial Statements.

FIVE-YEAR SUMMARIES OF SELECTED FINANCIAL DATA – SDG&E AND SOCIALGAS

(Dollars in millions)

	At December 31 or for the years then ended				
	2018	2017	2016	2015	2014
SDG&E:					
Statement of Operations Data:					
Operating revenues	\$ 4,568	\$ 4,476	\$ 4,253	\$ 4,219	\$ 4,329
Operating income ⁽¹⁾	1,010	709	976	1,045	976
Earnings attributable to common shares	669	407	570	587	507
Balance Sheet Data:					
Total assets	\$ 19,225	\$ 17,844	\$ 17,719	\$ 16,515	\$ 16,260
Long-term debt (excludes current portion) ⁽²⁾	6,138	5,335	4,658	4,455	4,283
Short-term debt ⁽³⁾	372	473	191	218	611
SDG&E shareholder's equity	6,015	5,598	5,641	5,223	4,932
SoCalGas:					
Statement of Operations Data:					
Operating revenues	\$ 3,962	\$ 3,785	\$ 3,471	\$ 3,489	\$ 3,855
Operating income ⁽¹⁾	591	627	551	548	490
Dividends on preferred stock	1	1	1	1	1
Earnings attributable to common shares	400	396	349	419	332
Balance Sheet Data:					
Total assets	\$ 15,389	\$ 14,159	\$ 13,424	\$ 12,104	\$ 10,446
Long-term debt (excludes current portion) ⁽²⁾	3,427	2,485	2,982	2,481	1,891
Short-term debt ⁽³⁾	259	617	62	9	50
SoCalGas shareholders' equity	4,258	3,907	3,510	3,149	2,781

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2 of the Notes to Consolidated Financial Statements.

⁽²⁾ Includes capital lease obligations.

⁽³⁾ Includes long-term debt due within one year and current portion of capital lease obligations.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

KEY EVENTS AND ISSUES IN 2018

Below are key events and issues that affected our business in 2018; some of these may continue to affect our future results.

- In March 2018, Sempra Energy completed the acquisition of an indirect 80.25-percent interest in Oncor Holdings. In anticipation of the closing, in January 2018, Sempra Energy completed registered public offerings of its common stock (including shares offered pursuant to forward sale agreements), series A preferred stock and long-term debt.
- In June 2018, Sempra Energy's board of directors approved a plan to divest certain non-utility natural gas storage assets in the southeast U.S., and all our U.S. wind and U.S. solar assets. In December 2018, Sempra Renewables completed the sale of all its U.S. operating solar assets, solar and battery storage development projects, and its interest in a wind generation facility to a subsidiary of Con Ed. In February 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners.
- In July 2018, Sempra Energy completed registered public offerings of its common stock (including shares offered pursuant to forward sale agreements) and series B preferred stock.
- In October 2018, Oncor entered into an agreement to acquire InfraREIT and its subsidiary, InfraREIT Partners. Also in October 2018, Sempra Energy entered into a separate agreement to acquire a 50-percent economic interest in Sharyland Holdings, LP. The transactions are expected to close in mid-2019.
- In December 2018, Polish Oil & Gas Company and Port Arthur LNG entered into a definitive 20-year agreement for the sale and purchase of 2 Mtpa of LNG per year, subject to final investment decision, among other things.

RESULTS OF OPERATIONS

In 2018, our earnings increased by approximately \$668 million to \$924 million and our diluted EPS increased by \$2.41 per share to \$3.42 per share. The change in EPS included a decrease of \$(0.24) attributable to an increase in the weighted-average common shares outstanding and dilutive common stock equivalents, primarily due to the common stock issuances in the first and third quarters of 2018 that we discuss in Note 14 of the Notes to Consolidated Financial Statements. In 2017 compared to 2016, our earnings decreased by \$1.1 billion (81%) to \$256 million and our diluted EPS decreased by \$4.45 per share (82%) to \$1.01 per share. Our earnings and diluted EPS were impacted by variances discussed in "Segment Results" below and by the items included in the table "Sempra Energy Adjusted Earnings and Adjusted EPS," also below.

SEGMENT RESULTS

The following section presents earnings (losses) by Sempra Energy segment, as well as Parent and other, and the related discussion of the changes in segment earnings (losses). Throughout the MD&A, our reference to earnings represents earnings attributable to common shares. Variance amounts presented are the after-tax earnings impact (based on applicable statutory tax rates), unless otherwise noted, and before NCI, where applicable. As we discuss below in "Changes in Revenues, Costs and Earnings – Income Taxes," on December 22, 2017, the TCJA was signed into law. The TCJA reduced the U.S. statutory corporate federal income tax rate from 35 percent to 21 percent, effective January 1, 2018. After-tax variances between 2018 and 2017 assume that amounts in both years were taxed at the 2017 statutory rate.

SEMPRA ENERGY EARNINGS (LOSSES) BY SEGMENT*(Dollars in millions)*

	Years ended December 31,		
	2018	2017	2016
SDG&E	\$ 669	\$ 407	\$ 570
SoCalGas ⁽¹⁾	400	396	349
Sempra Texas Utility	371	—	—
Sempra South American Utilities	199	186	156
Sempra Mexico	237	169	463
Sempra Renewables	328	252	55
Sempra LNG & Midstream	(617)	150	(107)
Parent and other ⁽¹⁾⁽²⁾	(663)	(1,304)	(116)
Earnings	\$ 924	\$ 256	\$ 1,370

⁽¹⁾ After preferred dividends.⁽²⁾ Includes \$1,165 million income tax expense from the effects of the TCJA in 2017, after-tax interest expense (\$360 million in 2018, \$170 million in 2017 and \$169 million in 2016), intercompany eliminations recorded in consolidation and certain corporate costs.**SDG&E**

The increase in earnings of \$262 million in 2018 was primarily due to:

- \$208 million charge in 2017 for the write-off of a regulatory asset associated with wildfire costs, which we discuss in Note 16 of the Notes to Consolidated Financial Statements;
- \$65 million higher earnings from electric transmission operations in 2018, including the annual FERC formulaic rate adjustment;
- \$28 million unfavorable impact in 2017 from the remeasurement of certain U.S. federal deferred income tax assets as a result of the TCJA; and
- \$27 million higher CPUC base operating margin authorized for 2018, primarily related to the lower federal income tax rate in 2018; **offset by**
- \$35 million higher net interest expense, of which \$25 million relates to the lower federal income tax rate in 2018; and
- \$11 million unfavorable impact due to lower cost of capital related to GRC base business, which excludes incremental projects and other balanced capital programs, in 2018, of which \$2 million relates to the lower federal income tax rate in 2018.

The decrease in earnings of \$163 million in 2017 compared to 2016 was primarily due to:

- \$208 million charge in 2017 for the write-off of a regulatory asset associated with wildfire costs; and
- \$28 million unfavorable impact from the remeasurement of certain U.S. federal deferred income tax assets as a result of the TCJA; **offset by**
- \$31 million of charges in 2016 associated with 2012-2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD;
- \$27 million higher CPUC base operating margin authorized for 2017 and lower non-refundable operating costs; and
- \$17 million increase in AFUDC related to equity.

SoCalGas

The increase in earnings of \$4 million (1%) in 2018 was primarily due to:

- \$36 million higher CPUC base operating margin authorized for 2018, net of expenses including depreciation. Of this increase, \$28 million relates to the lower federal income tax rate in 2018; and
- \$16 million higher PSEP earnings; **offset by**
- \$22 million higher net interest expense, of which \$15 million relates to the lower federal income tax rate in 2018;
- \$21 million unfavorable impact due to lower cost of capital related to GRC base business in 2018, of which \$4 million relates to the lower federal income tax rate in 2018; and
- \$22 million in 2018 from impacts associated with Aliso Canyon litigation compared to \$20 million in 2017.

The increase in earnings of \$47 million (13%) in 2017 compared to 2016 was primarily due to:

- \$49 million of charges in 2016 associated with 2012-2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD;
- \$16 million higher earnings associated with the PSEP and advanced metering assets; and

- \$13 million impairment of assets in 2016 related to the Southern Gas System Reliability Project (also referred to as the North-South Pipeline); **offset by**
- \$20 million for Aliso Canyon litigation reserves.

Sempra Texas Utility

Earnings of \$371 million in 2018 represent equity earnings from our investment in Oncor Holdings. We discuss the March 2018 acquisition in Note 5 of the Notes to Consolidated Financial Statements.

Sempra South American Utilities

The increase in earnings of \$13 million (7%) in 2018 was primarily due to \$11 million higher earnings from operations mainly from lower cost of purchased power and \$6 million due to a gain on the sale of a hydroelectric power plant development project in Peru.

The increase in earnings of \$30 million (19%) in 2017 compared to 2016 was primarily due to:

- \$16 million lower income tax expense, including \$17 million income tax expense in 2016 related to Peruvian tax reform, as we discuss below in “Changes in Revenues, Costs and Earnings – Income Taxes;”
- \$8 million higher earnings from operations primarily due to an increase in rates and lower operating expenses at Luz del Sur; and
- \$6 million higher earnings from foreign currency translation effects.

Sempra Mexico

The increase in earnings of \$68 million (40%) in 2018 was primarily due to:

- \$107 million higher earnings at TdM, including \$71 million impairment in 2017 of assets that were held for sale until June 1, 2018 and \$32 million improved operating results primarily as a result of major maintenance in 2017 and higher revenues in 2018;
- \$37 million higher pipeline operational earnings, primarily attributable to assets placed in service in the second quarter of 2017 and IEnova’s increased indirect ownership interest in TAG; and
- \$10 million improved operating results at Ecogas, mainly due to new rates approved by CRE and regulated revenues associated with recovery for revised tariffs; **offset by**
- \$132 million earnings attributable to NCI at IEnova in 2018 compared to \$73 million in 2017, as we discuss below in “Changes in Revenues, Costs and Earnings – Earnings Attributable to Noncontrolling Interests;”
- \$22 million lower capitalized financing costs, primarily associated with assets placed in service at the end of the first half of 2017, net of higher equity earnings in 2018 from AFUDC at the IMG JV; and
- \$7 million unfavorable impact from foreign currency and inflation effects, net of foreign currency derivatives effects, comprised of:
 - in 2018, \$43 million unfavorable foreign currency and inflation effects, offset by a \$1 million gain from foreign currency derivatives, *offset by*
 - in 2017, \$84 million unfavorable foreign currency and inflation effects, offset by a \$49 million gain from foreign currency derivatives (we discuss these effects below in “Impact of Foreign Currency and Inflation Rates on Results of Operations”).

The decrease in earnings of \$294 million in 2017 compared to 2016 was primarily due to:

- \$432 million noncash gain in 2016 associated with the remeasurement of our equity interest in IEnova Pipelines (formerly known as GdC);
- \$71 million unfavorable impact from foreign currency and inflation effects, net of foreign currency derivatives effects, comprised of:
 - in 2017, \$84 million unfavorable foreign currency and inflation effects, offset by a \$49 million gain from foreign currency derivatives, and
 - in 2016, \$55 million favorable foreign currency and inflation effects, offset by a \$19 million loss from foreign currency derivatives;
- \$28 million higher income tax expense in 2017 mainly related to a deferred income tax liability on an outside basis difference in JV investments; and
- \$28 million higher interest expense, including \$19 million at Ventika and \$8 million at IEnova Pipelines related to debt assumed in their respective acquisitions; **offset by**
- \$98 million higher pipeline operational earnings, primarily attributable to the increase in ownership in IEnova Pipelines from 50 percent to 100 percent in September 2016 and from other pipeline assets placed in service;

- \$73 million earnings attributable to NCI at IEnova in 2017, compared to \$133 million in 2016;
- \$71 million impairment in 2017 of the TdM natural gas-fired power plant, net of a \$12 million income tax benefit that has been fully reserved, compared to a \$111 million impairment in 2016 of such assets;
- \$34 million higher operational earnings in 2017 from Sempra Mexico's renewables business, primarily due to Ventika, which we acquired in December 2016; and
- \$8 million tax benefit in 2017 from a reduction to the outside basis deferred income tax liability on our investment in the TdM natural gas-fired power plant, compared to an \$8 million tax expense in 2016.

Sempra Renewables

The increase in earnings of \$76 million (30%) in 2018 was primarily due to:

- \$367 million gain on the sale of all Sempra Renewables' operating solar assets, solar and battery storage development projects and its 50-percent interest in a wind power generation facility in December 2018, as we discuss in Note 5 of the Notes to Consolidated Financial Statements;
- \$35 million higher pretax losses attributed to NCI, including the impact of the TCJA on NCI allocations computed using the HLBV method; and
- \$19 million lower depreciation as a result of solar and wind assets held for sale; **offset by**
- \$192 million favorable impact in 2017 from the remeasurement of U.S. federal deferred income tax liabilities as a result of the TCJA; and
- \$145 million other-than-temporary impairment of certain U.S. wind equity method investments in 2018, as we discuss in Notes 5, 6 and 12 of the Notes to Consolidated Financial Statements.

The increase in earnings of \$197 million in 2017 compared to 2016 was primarily due to:

- \$192 million favorable impact from the remeasurement of U.S. federal deferred income tax liabilities as a result of the TCJA; and
- \$14 million higher earnings from our solar tax equity investments, including \$19 million of higher pretax losses attributed to solar tax equity investors reflected in NCI, offset by \$7 million associated income taxes.

Sempra LNG & Midstream

Losses of \$617 million in 2018 compared to earnings of \$150 million in 2017 were primarily due to:

- \$665 million net impairment in 2018, including \$801 million impairment in the second quarter of 2018, offset by a \$136 million reduction to the impairment in the fourth quarter of 2018, of certain non-utility natural gas storage assets in the southeast U.S., some of which have been classified as held for sale, as we discuss in Notes 5 and 12 of the Notes to Consolidated Financial Statements;
- \$142 million higher income tax expense in 2018, which included \$133 million favorable impact in 2017 from the remeasurement of U.S. federal deferred income tax liabilities as a result of the TCJA and \$9 million unfavorable impact in 2018 to adjust TCJA provisional amounts recorded in 2017; and
- \$34 million settlement proceeds in 2017 from a breach of contract claim against a counterparty in bankruptcy court, of which \$28 million related to the charge in 2016 from the permanent release of certain pipeline capacity, as we discuss in Note 16 of the Notes to Consolidated Financial Statements; **offset by**
- \$36 million losses attributable to NCI in 2018 related to the net impairment discussed above;
- \$24 million higher earnings from midstream activities primarily driven by lower depreciation and amortization as a result of natural gas storage assets held for sale; and
- \$15 million improved results in 2018 from LNG marketing activities.

The increase of \$257 million in 2017 compared to 2016 was primarily due to:

- \$133 million favorable impact from the remeasurement of U.S. federal deferred income tax liabilities;
- \$123 million loss in 2016 on permanent release of certain pipeline capacity;
- \$40 million improved results in 2017 due to unfavorable results from midstream activities, including LNG operations, in 2016;
- \$34 million settlement proceeds received from a breach of contract claim against a counterparty in bankruptcy court; and
- \$27 million impairment charge in 2016 related to our investment in Rockies Express; **offset by**
- \$78 million gain on the sale of EnergySouth in September 2016, net of related expenses; and
- \$11 million lower equity earnings resulting from the sale of our investment in Rockies Express in May 2016.

Parent and Other

The decrease in losses of \$641 million in 2018 was primarily due to:

- \$1,165 million unfavorable impact in 2017 from the TCJA, offset by \$76 million income tax expense in 2018 to adjust provisional amounts recorded in 2017. We discuss the impacts from the TCJA in “Changes in Revenues, Costs and Earnings – Income Taxes” below; **offset by**
- \$185 million increase in net interest expense, of which \$58 million relates to the lower tax rate in 2018;
- \$125 million mandatory convertible preferred stock dividends declared;
- \$65 million impairment of the RBS Sempra Commodities equity method investment, which we discuss in Note 16 of the Notes to Consolidated Financial Statements; and
- \$15 million investment losses in 2018 compared to \$41 million investment gains in 2017 on dedicated assets in support of our executive retirement and deferred compensation plans, net of deferred compensation expense associated with these investments.

The increase in losses of \$1.2 billion in 2017 compared to 2016 was primarily due to:

- \$1,147 million income tax expense in 2017 compared to a \$54 million tax benefit in 2016, primarily due to:
 - \$1,165 million unfavorable impact from the TCJA,
 - \$20 million U.S. income tax benefit in 2016 as a result of a change in planned repatriation of earnings, as we discuss below in “Changes in Revenues, Costs and Earnings – Income Taxes,” and
 - \$17 million income tax benefit in 2016 associated with excess tax benefits related to share-based compensation; and
- \$20 million of costs in 2017 associated with foreign currency derivatives; **offset by**
- \$31 million higher investment gains on dedicated assets in support of our executive retirement and deferred compensation plans, net of an increase in deferred compensation expense associated with those investments.

ADJUSTED EARNINGS AND ADJUSTED EPS

We prepare the Consolidated Financial Statements in conformity with U.S. GAAP. However, management may use earnings and EPS adjusted to exclude certain items (referred to as adjusted earnings and adjusted EPS) internally for financial planning, for analysis of performance and for reporting of results to the board of directors. We may also use adjusted earnings and adjusted EPS when communicating our financial results and earnings outlook to analysts and investors. Adjusted earnings and adjusted EPS are non-GAAP financial measures. Because of the significance and/or nature of the excluded items, management believes that these non-GAAP financial measures provide a meaningful comparison of the performance of business operations to prior and future periods. Non-GAAP financial measures are supplementary information that should be considered in addition to, but not as a substitute for, the information prepared in accordance with U.S. GAAP.

The table below reconciles Sempra Energy Adjusted Earnings and Adjusted Diluted EPS to GAAP Earnings and GAAP Diluted EPS, which we consider to be the most directly comparable financial measures calculated in accordance with U.S. GAAP.

SEMPRA ENERGY ADJUSTED EARNINGS AND ADJUSTED EPS

(Dollars in millions, except per share amounts)

	Pretax amount	Income tax expense (benefit) ⁽¹⁾	Non-controlling interests	Earnings	Diluted EPS
Year ended December 31, 2018					
Sempra Energy GAAP Earnings				\$ 924	\$ 3.42
Excluded items:					
Gain on sale of certain Sempra Renewables assets	\$ (513)	\$ 146	\$ —	(367)	(1.36)
Impairment of investment in RBS Sempra Commodities	65	—	—	65	0.24
Impairment of non-utility natural gas storage assets	1,117	(452)	(36)	629	2.33
Impairment of U.S. wind equity method investments	200	(55)	—	145	0.54
Impacts associated with Aliso Canyon litigation	1	21	—	22	0.08
Impact from the TCJA	—	85	—	85	0.32
Sempra Energy Adjusted Earnings				<u>\$ 1,503</u>	<u>\$ 5.57</u>
Weighted-average shares outstanding, diluted (thousands)					269,852
Year ended December 31, 2017					
Sempra Energy GAAP Earnings				\$ 256	\$ 1.01
Excluded items:					
Impact from the TCJA	\$ —	\$ 870	\$ —	870	3.45
Write-off of wildfire regulatory asset	351	(143)	—	208	0.82
Impairment of TdM assets held for sale	71	—	(24)	47	0.19
Aliso Canyon litigation reserves	20	—	—	20	0.08
Deferred income tax benefit associated with TdM	—	(8)	3	(5)	(0.02)
Recoveries related to 2016 permanent release of pipeline capacity	(47)	19	—	(28)	(0.11)
Sempra Energy Adjusted Earnings				<u>\$ 1,368</u>	<u>\$ 5.42</u>
Weighted-average shares outstanding, diluted (thousands)					252,300
Year ended December 31, 2016					
Sempra Energy GAAP Earnings				\$ 1,370	\$ 5.46
Excluded items:					
Remeasurement gain in connection with GdC acquisition	\$ (617)	\$ 185	\$ 82	(350)	(1.39)
Gain on sale of EnergySouth	(130)	52	—	(78)	(0.31)
Permanent release of pipeline capacity	206	(83)	—	123	0.49
SDG&E tax repairs adjustments related to 2016 GRC FD	52	(21)	—	31	0.12
SoCalGas tax repairs adjustments related to 2016 GRC FD	83	(34)	—	49	0.19
Impairment of investment in Rockies Express	44	(17)	—	27	0.11
Impairment of TdM assets held for sale	131	(20)	(21)	90	0.36
Deferred income tax expense associated with TdM	—	8	(3)	5	0.02
Sempra Energy Adjusted Earnings				<u>\$ 1,267</u>	<u>\$ 5.05</u>
Weighted-average shares outstanding, diluted (thousands)					251,155

⁽¹⁾ Except for adjustments that are solely income tax and tax related to outside basis differences, income taxes were primarily calculated based on applicable statutory tax rates. Income taxes associated with TdM were calculated based on the applicable statutory tax rate, including translation from historic to current exchange rates. An income tax benefit of \$12 million associated with the 2017 TdM impairment has been fully reserved.

For each period in which a non-GAAP financial measure is used, we provide in the tables below a reconciliation of SDG&E and SoCalGas Adjusted Earnings to GAAP Earnings, which we consider to be the most directly comparable financial measure calculated in accordance with U.S. GAAP.

SDG&E ADJUSTED EARNINGS

(Dollars in millions)

	Pretax amount	Income tax expense (benefit) ⁽¹⁾	Earnings
Year ended December 31, 2017			
SDG&E GAAP Earnings			\$ 407
Excluded items:			
Impact from the TCJA	\$ —	\$ 28	28
Write-off of wildfire regulatory asset	351	(143)	208
SDG&E Adjusted Earnings			<u>\$ 643</u>
Year ended December 31, 2016			
SDG&E GAAP Earnings			\$ 570
Excluded item:			
SDG&E tax repairs adjustments related to 2016 GRC FD	\$ 52	\$ (21)	31
SDG&E Adjusted Earnings			<u>\$ 601</u>

⁽¹⁾ Income taxes were calculated based on applicable statutory tax rates, except for adjustments that are solely income tax.

SOCALGAS ADJUSTED EARNINGS

(Dollars in millions)

	Pretax amount	Income tax expense (benefit) ⁽¹⁾	Earnings
Year ended December 31, 2018			
SoCalGas GAAP Earnings			\$ 400
Excluded item:			
Impacts associated with Aliso Canyon litigation	\$ 1	\$ 21	22
SoCalGas Adjusted Earnings			<u>\$ 422</u>
Year ended December 31, 2017			
SoCalGas GAAP Earnings			\$ 396
Excluded items:			
Impact from the TCJA	\$ —	\$ 2	2
Aliso Canyon litigation reserves	20	—	20
SoCalGas Adjusted Earnings			<u>\$ 418</u>
Year ended December 31, 2016			
SoCalGas GAAP Earnings			\$ 349
Excluded item:			
SoCalGas tax repairs adjustments related to 2016 GRC FD	\$ 83	\$ (34)	49
SoCalGas Adjusted Earnings			<u>\$ 398</u>

⁽¹⁾ Income taxes were calculated based on applicable statutory tax rates, except for adjustments that are solely income tax.

CHANGES IN REVENUES, COSTS AND EARNINGS

This section contains a discussion of the differences between periods in the specific line items of the Consolidated Statements of Operations for Sempra Energy, SDG&E and SoCalGas.

Utilities Revenues

Our utilities revenues include:

Electric revenues at:

- SDG&E
- Sempra South American Utilities' Chilquinta Energía and Luz del Sur

Natural gas revenues at:

- SDG&E
- SoCalGas
- Sempra Mexico's Ecogas
- Sempra LNG & Midstream's Mobile Gas and Willmut Gas (prior to the sale of EnergySouth on September 12, 2016)

Intercompany revenues included in the separate revenues of each utility are eliminated in the Sempra Energy Consolidated Statements of Operations.

SoCalGas and SDG&E currently operate under a regulatory framework that:

- permits SDG&E to recover the actual cost incurred to generate or procure electricity based on annual estimates of the cost of electricity supplied to customers. The differences in cost between estimates and actual are recovered in subsequent periods through rates.
- permits the cost of natural gas purchased for core customers (primarily residential and small commercial and industrial customers) to be passed through to customers in rates substantially as incurred. However, SoCalGas' GCIM provides SoCalGas the opportunity to share in the savings and/or costs from buying natural gas for its core customers at prices below or above monthly market-based benchmarks. This mechanism permits full recovery of costs incurred when average purchase costs are within a price range around the benchmark price. Any higher costs incurred or savings realized outside this range are shared between the core customers and SoCalGas. We provide further discussion in Note 1 of the Notes to Consolidated Financial Statements and "Item 1. Business – Ratemaking Mechanisms – California Utilities."
- also permits the California Utilities to recover certain expenses for programs authorized by the CPUC, or "refundable programs."

Because changes in SDG&E's and SoCalGas' cost of electricity and/or natural gas are substantially recovered in rates, changes in these costs are offset in the changes in revenues, and therefore do not impact earnings. In addition to the changes in cost or market prices, electric or natural gas revenues recorded during a period are impacted by customer billing cycles causing a difference between customer billings and recorded or authorized costs. These differences are required to be balanced over time, resulting in over- and undercollected regulatory balancing accounts. We discuss balancing accounts and their effects further in Note 4 of the Notes to Consolidated Financial Statements.

The table below summarizes revenues and cost of sales for our utilities.

UTILITIES REVENUES AND COST OF SALES

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Electric revenues:			
SDG&E	\$ 4,003	\$ 3,935	\$ 3,754
Sempra South American Utilities	1,507	1,486	1,463
Eliminations and adjustments	(4)	(6)	(6)
Total	<u>5,506</u>	<u>5,415</u>	<u>5,211</u>
Natural gas revenues:			
SoCalGas	3,962	3,785	3,471
SDG&E	565	541	499
Sempra Mexico	78	110	88
Sempra LNG & Midstream ⁽¹⁾	—	—	68
Eliminations and adjustments	(65)	(75)	(76)
Total	<u>4,540</u>	<u>4,361</u>	<u>4,050</u>
Total utilities revenues	<u>\$ 10,046</u>	<u>\$ 9,776</u>	<u>\$ 9,261</u>
Cost of electric fuel and purchased power:			
SDG&E	\$ 1,370	\$ 1,293	\$ 1,187
Sempra South American Utilities	965	988	1,001
Eliminations and adjustments	(12)	—	—
Total	<u>\$ 2,323</u>	<u>\$ 2,281</u>	<u>\$ 2,188</u>
Cost of natural gas:			
SoCalGas	\$ 1,048	\$ 1,025	\$ 891
SDG&E	152	164	127
Sempra Mexico	21	70	52
Sempra LNG & Midstream ⁽¹⁾	—	—	17
Eliminations and adjustments	(13)	(69)	(20)
Total	<u>\$ 1,208</u>	<u>\$ 1,190</u>	<u>\$ 1,067</u>

⁽¹⁾ In September 2016, we completed the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas.

Electric Revenues and Cost of Electric Fuel and Purchased Power

Our electric revenues increased by \$91 million (2%) to \$5.5 billion in 2018 primarily due to:

- \$68 million increase at SDG&E, including:
 - \$77 million higher cost of electric fuel and purchased power, which we discuss below,
 - \$50 million higher revenues from transmission operations, including the annual FERC formulaic rate adjustment,
 - \$32 million decrease in charges in 2018 associated with tracking the income tax benefit from certain flow-through items in relation to forecasted amounts in the 2016 GRC FD, and
 - \$32 million increase in 2018 due to an increase in rates permitted under the attrition mechanism in the 2016 GRC FD, *offset by*
 - \$65 million revenue requirement deferral due to the effect of the TCJA,
 - \$39 million revenue requirement deferral related to the SONGS settlement, which is offset by the discontinuation of amortization, and
 - \$13 million lower cost of capital related to GRC base business in 2018; and
- \$21 million increase at Sempra South American Utilities primarily due to higher rates at Luz del Sur, offset by lower rates at Chilquinta Energía. The increase was offset by lower volumes at Luz del Sur, which were primarily driven by weather and the migration of regulated and non-regulated customers to tolling customers, who pay only a tolling fee.

In 2017 compared to 2016, our electric revenues increased by \$204 million (4%) to \$5.4 billion primarily due to:

- \$181 million increase at SDG&E, including:
 - \$106 million higher cost of electric fuel and purchased power,

- \$52 million of charges in 2016 associated with 2012-2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD,
- \$52 million increase due to 2017 attrition, and
- \$31 million higher authorized revenues from electric transmission, *offset by*
- \$50 million charge in 2017 associated with tracking the income tax benefit from certain flow-through items in relation to forecasted amounts in the 2016 GRC FD; and
- \$23 million increase at Sempra South American Utilities, including:
 - \$56 million due to foreign currency exchange rate effects, and
 - \$44 million due to higher rates at Luz del Sur, offset by lower rates at Chilquinta Energía, *offset by*
 - \$75 million lower volumes at Luz del Sur, primarily due to the migration of regulated and non-regulated customers to tolling customers, who pay only a tolling fee.

Our utilities' cost of electric fuel and purchased power increased by \$42 million (2%), remaining at \$2.3 billion in 2018, primarily due to:

- \$77 million increase at SDG&E driven primarily by higher gas prices and electricity market costs, partially offset by lower cost of purchased power from renewable sources due to decreased solar and wind production and from lower capacity contract costs; **offset by**
- \$23 million decrease at Sempra South American Utilities primarily due to lower volumes at Luz del Sur and lower prices at Chilquinta Energía, offset by higher prices at Luz del Sur.

Our utilities' cost of electric fuel and purchased power increased by \$93 million (4%) to \$2.3 billion in 2017 compared to 2016 primarily due to:

- \$106 million increase at SDG&E, primarily due to an increase in the cost of purchased power due to higher natural gas prices, an increase from the incremental purchase of renewable energy at higher prices and an additional capacity contract; **offset by**
- \$13 million decrease at Sempra South American Utilities primarily due to:
 - \$48 million lower volumes at Luz del Sur, *offset by*
 - \$38 million due to foreign currency exchange rate effects.

Natural Gas Revenues and Cost of Natural Gas

The table below summarizes the average cost of natural gas sold by the California Utilities and included in Cost of Natural Gas. The average cost of natural gas sold at each utility is impacted by market prices, as well as transportation, tariff and other charges.

CALIFORNIA UTILITIES AVERAGE COST OF NATURAL GAS

(Dollars per thousand cubic feet)

	Years ended December 31,		
	2018	2017	2016
SoCalGas	\$ 3.58	\$ 3.44	\$ 3.05
SDG&E	3.81	4.08	3.20

In 2018, our natural gas revenues increased by \$179 million (4%) to \$4.5 billion primarily due to:

- \$177 million increase at SoCalGas, which included:
 - \$160 million higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are offset in O&M,
 - \$71 million increase due to 2018 attrition,
 - \$23 million increase in cost of natural gas sold, which we discuss below, and
 - \$19 million decrease in charges in 2018 associated with tracking the income tax benefit from flow-through items in relation to forecasted amounts in the 2016 GRC FD, *offset by*
 - \$67 million revenue requirement deferral due to the effect of the TCJA,
 - \$29 million lower cost of capital related to GRC base business in 2018, and
 - \$10 million lower net revenues from capital projects, including \$60 million decrease for advanced metering infrastructure due to completion of the project, offset by increases of \$14 million for PSEP and \$36 million for other capital projects; and
- \$24 million increase at SDG&E primarily due to higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are offset in O&M, and 2018 attrition; **offset by**

- \$32 million decrease at Sempra Mexico, which included:
 - \$46 million lower volumes at Ecogas primarily as a result of the new regulations that went into effect on March 1, 2018 that no longer allow Ecogas to sell natural gas to high consumption end users (defined by the CRE as customers with annual consumption that exceeds 4,735 MMBtu) and require those end users to procure their natural gas needs from natural gas marketers, including Sempra Mexico's marketing business, *offset by*
 - \$13 million higher rates approved by the CRE, including \$7 million from a regulatory adjustment to rates charged to end users in 2014 through 2016.

In 2017 compared to 2016, our natural gas revenues increased by \$311 million (8%) to \$4.4 billion primarily due to:

- \$314 million increase at SoCalGas, which included:
 - \$134 million increase in cost of natural gas sold,
 - \$83 million of charges in 2016 associated with 2012-2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD,
 - \$57 million increase due to 2017 attrition, and
 - \$49 million higher revenues primarily associated with the PSEP, *offset by*
 - \$19 million in 2016 to reduce estimated 2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD to actual deductions taken on the 2015 tax return;
- \$42 million increase at SDG&E, which included:
 - \$37 million increase in cost of natural gas sold, and
 - \$21 million higher revenues primarily associated with the PSEP, *offset by*
 - \$16 million lower recovery of costs associated with CPUC-authorized refundable programs, which revenues are offset in O&M; and
- \$22 million increase at Sempra Mexico primarily due to higher natural gas prices and higher rates for distribution at Ecogas; **offset by**
- \$68 million decrease at Sempra LNG & Midstream due to the sale of EnergySouth in September 2016.

Our cost of natural gas increased by \$18 million (2%), remaining at \$1.2 billion in 2018, primarily due to:

- \$56 million increase primarily from lower elimination of intercompany costs at Sempra Mexico; and
- \$23 million increase at SoCalGas due to \$43 million from higher average gas prices, offset by \$20 million from lower volumes driven by weather; **offset by**
- \$49 million decrease at Sempra Mexico primarily associated with the lower revenues at Ecogas; and
- \$12 million decrease at SDG&E primarily due to lower average gas prices.

Our cost of natural gas increased by \$123 million (12%) to \$1.2 billion in 2017 compared to 2016 primarily due to:

- \$134 million increase at SoCalGas due to \$114 million from higher average gas prices and \$20 million from higher volumes driven by weather;
- \$37 million increase at SDG&E primarily due to higher average gas prices; and
- \$18 million increase at Sempra Mexico primarily due to higher natural gas prices at Ecogas; **offset by**
- \$49 million decrease primarily from higher elimination of intercompany costs at Sempra Mexico.

Energy-Related Businesses: Revenues and Cost of Sales

The table below shows revenues and cost of sales for our energy-related businesses.

ENERGY-RELATED BUSINESSES: REVENUES AND COST OF SALES

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
REVENUES			
Sempra South American Utilities	\$ 78	\$ 81	\$ 93
Sempra Mexico	1,298	1,086	637
Sempra Renewables	124	94	34
Sempra LNG & Midstream	472	540	440
Eliminations and adjustments	(331)	(370)	(282)
Total revenues	\$ 1,641	\$ 1,431	\$ 922
COST OF SALES⁽¹⁾			
Cost of natural gas, electric fuel and purchased power:			
Sempra South American Utilities	\$ 18	\$ 20	\$ 13
Sempra Mexico	354	252	200
Sempra LNG & Midstream	294	382	337
Eliminations and adjustments	(311)	(315)	(273)
Total	\$ 355	\$ 339	\$ 277
Other cost of sales:			
Sempra South American Utilities	\$ 58	\$ 52	\$ 69
Sempra Mexico	9	9	10
Sempra LNG & Midstream	19	(30)	251
Eliminations and adjustments	(8)	(7)	(8)
Total	\$ 78	\$ 24	\$ 322

⁽¹⁾ Excludes depreciation and amortization, which are presented separately on the Sempra Energy Consolidated Statements of Operations.

Revenues from our energy-related businesses increased by \$210 million (15%) to \$1.6 billion in 2018. The increase included:

- \$212 million increase at Sempra Mexico primarily due to:
 - \$84 million from the marketing business, primarily due to new regulations that went into effect on March 1, 2018 that require high consumption end users (previously serviced by Ecogas and other natural gas utilities) to procure their natural gas needs from natural gas marketers, including Sempra Mexico's marketing business, and from higher volumes and gas prices,
 - \$69 million at TdM primarily due to the plant outage in 2017 as a result of scheduled major maintenance and higher power prices,
 - \$34 million primarily due to pipeline assets placed in service in the second quarter of 2017, and
 - \$18 million from O&M services provided to the TAG JV;
- \$39 million increase from lower intercompany eliminations associated with sales between Sempra LNG & Midstream and Sempra Mexico; and
- \$30 million increase at Sempra Renewables primarily due to solar and wind assets placed in service in the fourth quarter of 2017 and the second quarter of 2018; **offset by**
- \$68 million decrease at Sempra LNG & Midstream primarily due to:
 - \$98 million costs associated with indemnity payments to Sempra Mexico in 2018. Indemnity payments of \$103 million in 2017 were recorded in Cost of Natural Gas, Electric Fuel and Purchased Power prior to adoption of ASC 606, *offset by*
 - \$50 million from the marketing business primarily from higher natural gas sales and turnback cargo revenues.

In 2017 compared to 2016, revenues from our energy-related businesses increased by \$509 million (55%) to \$1.4 billion. The increase included:

- \$449 million increase at Sempra Mexico primarily due to:
 - \$293 million from the acquisition of the remaining 50-percent interest in IEnova Pipelines in September 2016 and from other pipeline assets placed in service,
 - \$96 million from the acquisition of Ventika in December 2016,
 - \$30 million higher revenues primarily due to higher natural gas prices and customer base in its gas business, and
 - \$28 million increase at TdM due to higher power prices and volumes;
- \$100 million increase at Sempra LNG & Midstream, which included:
 - \$51 million primarily from natural gas marketing activities, including an increase in sales of natural gas, and from changes in natural gas prices,
 - \$29 million from higher natural gas and LNG sales to Sempra Mexico primarily due to higher natural gas prices,
 - \$12 million from non-delivery of LNG cargoes due to higher natural gas prices, and
 - \$10 million attributable to Cameron Interstate Pipeline; and
- \$60 million increase at Sempra Renewables primarily due to solar and wind assets placed in service during 2016; **offset by**
- \$88 million primarily from higher intercompany eliminations associated with sales between Sempra LNG & Midstream and Sempra Mexico.

The cost of natural gas, electric fuel and purchased power for our energy-related businesses increased by \$16 million (5%) to \$355 million in 2018 primarily due to:

- \$102 million at Sempra Mexico primarily associated with higher revenues from the marketing business as a result of the new regulations that went into effect in 2018. The increase at Sempra Mexico was also due to higher volumes in 2018 due to the TdM plant outage in 2017; and
- \$4 million lower intercompany eliminations of costs between Sempra LNG & Midstream and Sempra Mexico, including \$103 million elimination of indemnity payments made by Sempra LNG & Midstream in 2017 now recorded as a reduction to Energy-Related Business Revenues since adoption of ASC 606; **offset by**
- \$88 million decrease at Sempra LNG & Midstream primarily due to indemnity payments to Sempra Mexico in 2017 recorded in revenues in 2018 pursuant to adoption of ASC 606.

The cost of natural gas, electric fuel and purchased power for our energy-related businesses increased by \$62 million (22%) to \$339 million in 2017 compared to 2016 primarily due to:

- \$52 million increase at Sempra Mexico primarily due to higher natural gas costs and customer base in its gas business; and
- \$45 million increase at Sempra LNG & Midstream primarily due to higher natural gas costs; **offset by**
- \$42 million from higher intercompany eliminations of costs associated with sales between Sempra LNG & Midstream and Sempra Mexico.

Other cost of sales for our energy-related businesses increased by \$54 million to \$78 million in 2018 primarily due to \$57 million in settlement proceeds received by Sempra LNG & Midstream in May 2017 from a breach of contract claim against a counterparty, of which \$47 million is related to the charge in 2016 from permanent release of pipeline capacity.

Other cost of sales for our energy-related businesses decreased by \$298 million to \$24 million in 2017 compared to 2016 primarily due to:

- \$206 million charge in 2016 related to Sempra LNG & Midstream's permanent release of certain pipeline capacity;
- \$57 million settlement proceeds received by Sempra LNG & Midstream in May 2017 from a breach of contract claim against a counterparty;
- \$18 million capacity costs in 2016 on the Rockies Express pipeline that have since been permanently released; and
- \$16 million due to lower sales of electrical services and materials at Tecnored.

Operation and Maintenance

In the table below, we provide a breakdown of O&M by segment.

	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
SDG&E	\$ 1,058	\$ 1,024	\$ 1,062
SoCalGas	1,613	1,474	1,391
Sempra South American Utilities	178	169	171
Sempra Mexico	239	234	149
Sempra Renewables	89	73	54
Sempra LNG & Midstream	123	123	155
Parent and other ⁽²⁾	9	(1)	(6)
Total operation and maintenance	\$ 3,309	\$ 3,096	\$ 2,976

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2 of the Notes to Consolidated Financial Statements.

⁽²⁾ Includes eliminations of intercompany activity.

Our O&M increased by \$213 million (7%) to \$3.3 billion in 2018 primarily due to:

- \$139 million increase at SoCalGas which included:
 - \$160 million higher expenses associated with CPUC-authorized refundable programs for which costs incurred are recovered in revenue (refundable program expenses), *offset by*
 - \$20 million Aliso Canyon litigation reserves in 2017;
- \$34 million increase at SDG&E, which included:
 - \$22 million higher non-refundable operating costs, including labor, contract services and administrative and support costs, and
 - \$11 million reimbursement of litigation costs in 2017 associated with the arbitration ruling over the SONGS replacement steam generators, as we discuss in Note 15 of the Notes to Consolidated Financial Statements; and
- \$16 million increase at Sempra Renewables primarily due to solar and wind assets placed in service in the fourth quarter of 2017 and the second quarter of 2018 and selling costs associated with the sale of assets.

Our O&M increased by \$120 million (4%) to \$3.1 billion in 2017 compared to 2016 primarily due to:

- \$85 million increase at Sempra Mexico primarily due to the consolidation of IEnova Pipelines and Ventika in 2016, from the growth in Sempra Mexico's businesses, and from scheduled major maintenance at TdM in the second quarter of 2017;
- \$83 million increase at SoCalGas, which included:
 - \$54 million higher non-refundable operating costs primarily associated with higher safety-related maintenance and inspection activity, as well as other labor, contract services and administrative and support costs, and
 - \$20 million Aliso Canyon litigation reserves in 2017; and
- \$19 million increase at Sempra Renewables primarily due to solar and wind assets placed in service in the fourth quarter of 2016 and higher general and administrative and development costs; **offset by**
- \$38 million decrease at SDG&E, which included:
 - \$33 million lower expenses associated with CPUC-authorized refundable programs,
 - \$12 million decrease at Otay Mesa VIE primarily due to scheduled major maintenance in 2016 at the OMEC plant, and
 - \$11 million reimbursement of litigation costs associated with the arbitration ruling over the SONGS replacement steam generators, *offset by*
 - \$16 million higher non-refundable operating costs, including labor, contract services and administrative and support costs; and
- \$32 million decrease at Sempra LNG & Midstream, \$25 million of which was due to the sale of EnergySouth in September 2016.

Write-Off of Wildfire Regulatory Asset

In the third quarter of 2017, SDG&E recorded a \$351 million charge for the write-off of a regulatory asset associated with wildfire costs. We discuss this further in Note 16 of the Notes to Consolidated Financial Statements.

Impairment Losses

In June 2018, Sempra LNG & Midstream recognized a \$1.3 billion impairment loss for certain non-utility natural gas storage assets in the southeast U.S. held for sale, and in December 2018, we reduced the impairment loss to \$1.1 billion, as we discuss in Notes 5 and 12 of the Notes to Consolidated Financial Statements.

Sempra Mexico reduced the carrying value of TdM by recognizing noncash impairment charges of \$71 million in 2017 and \$131 million in 2016, as we discuss in Notes 5 and 12 of the Notes to Consolidated Financial Statements. In 2016, SoCalGas recorded a \$21 million impairment of assets related to the Southern Gas System Reliability project.

Gain on Sale of Assets

In December 2018, Sempra Renewables recognized a \$513 million gain on the sale of all its operating solar assets, solar and battery storage development projects and its 50-percent interest in a wind power generation facility to a subsidiary of Con Ed. In 2016, Sempra LNG & Midstream recognized a \$130 million gain on the sale of EnergySouth. We discuss these divestitures in Note 5 of the Notes to Consolidated Financial Statements.

Remeasurement of Equity Method Investment

In the third quarter of 2016, Sempra Mexico recorded a \$617 million noncash gain associated with the remeasurement of its 50-percent equity interest in IEnova Pipelines. We discuss the transaction further in Notes 5 and 12 of the Notes to Consolidated Financial Statements.

Other Income, Net

As part of our central risk management function, we enter into foreign currency derivatives to hedge Sempra Mexico parent's exposure to movements in the Mexican peso from its controlling interest in IEnova. The gains/losses associated with these derivatives are included in Other Income, Net, as described below, and partially mitigate the transactional effects of foreign currency and inflation included in Income Taxes and in earnings from Sempra Mexico's equity method investments. We discuss policies governing our risk management in "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" below.

Other income, net, decreased by \$161 million to \$72 million in 2018 primarily due to:

- \$70 million decrease in equity-related AFUDC mainly from completion of pipeline projects at Sempra Mexico in 2017;
- \$6 million investment losses in 2018 compared to \$56 million investment gains in 2017 on dedicated assets in support of our executive retirement and deferred compensation plans;
- \$16 million higher non-service component of net periodic benefit cost in 2018, including \$10 million at SDG&E and \$5 million at SoCalGas; and
- \$10 million lower net gains from interest rate and foreign exchange instruments and foreign currency transactions primarily due to:
 - \$46 million lower gains in 2018 on foreign currency derivatives as a result of fluctuation of the Mexican peso, *offset by*
 - \$32 million lower losses in 2018 on a Mexican peso-denominated loan to the IMG JV, which is offset in Equity Earnings.

In 2017 compared to 2016, other income, net, increased by \$95 million (69%) to \$233 million and included the following activity:

- \$47 million net gains in 2017 on interest rate and foreign exchange instruments, compared to \$32 million net losses in 2016 primarily as a result of fluctuation of the Mexican peso;
- \$52 million increase in equity-related AFUDC, including:
 - \$17 million increase at SDG&E, and
 - \$32 million increase at Sempra Mexico primarily from the Ojinaga and San Isidro pipeline projects; and
- \$33 million higher investment gains in 2017 on dedicated assets in support of our executive retirement and deferred compensation plans; **offset by**
- \$34 million higher foreign currency transactional losses in 2017, primarily related to a Mexican peso-denominated note receivable due from IMG JV; and
- \$21 million non-service component of net periodic benefit cost in 2017 compared to a \$6 million credit in 2016.

We provide further details of the components of other income, net, in Note 1 of the Notes to Consolidated Financial Statements.

Income Taxes

The table below shows the income tax expense and ETRs for Sempra Energy, SDG&E and SoCalGas.

INCOME TAX EXPENSE AND EFFECTIVE INCOME TAX RATES

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
Income tax expense	\$ 96	\$ 1,276	\$ 389
Income before income taxes and equity earnings of unconsolidated entities	\$ 1,046	\$ 1,551	\$ 1,824
Equity (losses) earnings, before income tax ⁽¹⁾	(236)	34	6
Pretax income	\$ 810	\$ 1,585	\$ 1,830
Effective income tax rate	12%	81%	21%
SDG&E:			
Income tax expense	\$ 173	\$ 155	\$ 280
Income before income taxes	\$ 849	\$ 576	\$ 845
Effective income tax rate	20%	27%	33%
SoCalGas:			
Income tax expense	\$ 92	\$ 160	\$ 143
Income before income taxes	\$ 493	\$ 557	\$ 493
Effective income tax rate	19%	29%	29%

⁽¹⁾ We discuss how we recognize equity earnings in Note 6 of the Notes to Consolidated Financial Statements.

On December 22, 2017, the TCJA was signed into law. As discussed below, we recorded additional income tax expense of \$870 million from the effects of the TCJA in 2017, which significantly impacts our following comparisons of income tax expense from 2018 to 2017 and 2017 to 2016.

Following are the key provisions of the TCJA that impact us:

- **Lower U.S. statutory corporate income tax rate:** The TCJA reduced the U.S. statutory corporate income tax rate from 35 percent to 21 percent, effective January 1, 2018. Generally, we expect the resultant benefit of lower income tax expense at SDG&E and SoCalGas to be allocated to ratepayers.
- **Deemed repatriation:** The TCJA imposed a one-time tax for deemed repatriation of cumulative undistributed earnings of non-U.S. subsidiaries, which we recorded in 2017. Under the deemed repatriation provision of the TCJA, a U.S. shareholder must include in taxable income its pro-rata share of cumulative foreign undistributed earnings, which were taxed at 15.5 percent on cash or cash equivalents and 8 percent on cumulative other earnings.
- **Territorial tax system:** The TCJA adopted a territorial system of taxation that replaced the previous worldwide taxation approach. The TCJA provides for a 100-percent-dividends-received deduction for foreign source dividends, effectively resulting in no federal income taxes on repatriation of foreign earnings after 2017.
- **Full expensing of depreciable property:** Property placed in service after September 27, 2017 is generally eligible for full expensing. Regulated public utilities, including the California Utilities, are not eligible for full expensing after December 31, 2017.
- **Limitation of interest deductions:** The TCJA limits the deduction for interest expense that exceeds adjusted taxable income as defined in the IRC. Any disallowed interest expense can be carried forward indefinitely. The California Utilities are excepted from this limitation.
- **Executive compensation deduction limitation:** The TCJA amended the definition of a covered employee and eliminated certain exceptions previously allowed under prior law, limiting the annual deductible compensation expense for a covered employee to \$1 million.
- **NOL deductions:** U.S. federal NOL carryforwards generated in years starting in 2018 are limited to 80 percent of taxable income. The TCJA permits new NOLs to be carried forward indefinitely, but no longer allows any carryback.
- **Global intangible low-taxed income:** The TCJA included a new requirement that foreign income in excess of a deemed return on tangible assets of foreign subsidiaries be included as current taxable income of their U.S. shareholder.

We recorded the effects of the TCJA in 2017 using our best estimates and the information available to us through the date those financial statements were issued. In 2018, we adjusted our 2017 provisional estimates and completed our accounting for the

income tax effects of the TCJA as permitted by ASU 2018-05, which we describe in Note 2 of the Notes to Consolidated Financial Statements.

We discuss these 2017 TCJA impacts and related 2018 provisional adjustments further in Note 8 of the Notes to Consolidated Financial Statements.

We have not recorded deferred income taxes with respect to remaining basis differences of approximately \$1 billion between financial statement and income tax investment amounts in our non-U.S. subsidiaries because we consider them to be indefinitely reinvested as of December 31, 2018. It is currently not practicable to determine the hypothetical amount of tax that might be payable if the underlying basis differences were realized. On January 25, 2019, our board of directors approved a plan to sell our South American businesses, as we discuss in Note 5 of the Notes to Consolidated Financial Statements. We are evaluating the effects of the planned sale on our indefinite reinvestment assertion and expect to record any impacts to our tax provision in the first quarter of 2019.

Sempra Energy Consolidated

Sempra Energy's income tax expense decreased in 2018 due to a lower ETR and lower pretax income. Pretax income in 2018 was impacted by the impairments at our Sempra LNG & Midstream and Sempra Renewables segments offset by the gain from the sale of assets at Sempra Renewables, while the pretax income in 2017 was impacted by the write-off of SDG&E's wildfire regulatory asset. The lower ETR was primarily due to:

- \$870 million income tax expense in 2017 from the effects of the TCJA, as follows:
 - \$688 million related to future repatriation of foreign earnings, including \$328 million of U.S. federal income tax expense pertaining to the deemed repatriation tax and \$360 million U.S. state and non-U.S. withholding tax expense on our expected future repatriation of foreign undistributed earnings estimated for deemed repatriation, and
 - \$182 million from remeasurement of our U.S. federal deferred income tax balances from 35 percent to 21 percent;
- \$131 million income tax benefit in 2018 resulting from the reduced outside basis difference in Sempra LNG & Midstream as a result of the impairment of certain non-utility natural gas storage assets;
- \$98 million lower income tax expense from the lower U.S. statutory corporate federal income tax rate in 2018; and
- \$42 million lower income tax expense from foreign currency and inflation effects, primarily as a result of fluctuation of the Mexican peso; **offset by**
- \$85 million income tax expense in 2018 to adjust 2017 provisional estimates for the effects of the TCJA;
- \$21 million income tax expense in 2018 associated with Aliso Canyon natural gas storage facility litigation; and
- lower income tax benefits from flow-through deductions in 2018.

Sempra Energy's income tax expense increased in 2017 compared to 2016 due to a higher ETR, partially offset by lower pretax income. The higher ETR was primarily due to:

- \$870 million income tax expense in 2017 from the effects of the TCJA, as discussed above;
- \$62 million income tax expense in 2017, compared to \$38 million income tax benefit in 2016, from foreign currency and inflation effects, primarily as a result of fluctuation of the Mexican peso in 2017; and
- \$34 million income tax benefit in 2016 associated with excess tax benefits related to share-based compensation; **offset by**
- \$33 million income tax benefit in 2017, compared to \$3 million income tax expense in 2016, related to the resolution of prior years' income tax items.

We report as part of our pretax results the income or loss attributable to NCI. However, we do not record income taxes for a portion of this income or loss, as some of our entities with NCI are currently treated as partnerships for income tax purposes, and thus we are only liable for income taxes on the portion of the earnings that are allocated to us. Our pretax income, however, includes 100 percent of these entities. As our entities with NCI grow, and as we may continue to invest in such entities, the impact on our ETR may become more significant.

SDG&E

SDG&E's income tax expense increased in 2018 due to higher pretax income partially offset by a lower ETR. The pretax income in 2017 included the \$351 million (\$208 million after tax) write-off of the wildfire regulatory asset. The lower ETR was primarily due to:

- \$119 million lower income tax expense from the lower U.S. statutory corporate federal income tax rate in 2018; and

- \$28 million deferred income tax expense in 2017 from remeasurement of U.S. federal deferred income tax balances from 35 percent to 21 percent, primarily from the deferred income tax asset relating to the impairment of the SONGS Steam Generator Replacement Project in prior years; **offset by**
- \$19 million lower income tax benefit in 2018 from the resolution of prior years' income tax items; and
- lower income tax benefits from flow-through deductions in 2018.

SDG&E's income tax expense decreased in 2017 compared to 2016 due to lower pretax income and a lower ETR. The pretax income in 2017 included the \$351 million (\$208 million after tax) write-off of wildfire regulatory asset. The lower ETR was primarily due to:

- \$12 million higher income tax benefit in 2017 from the resolution of prior years' income tax items; and
- higher flow-through deductions in 2017; **offset by**
- \$28 million deferred income tax expense from remeasurement of U.S. federal deferred income tax balances; and
- \$7 million income tax benefit in 2016 associated with excess tax benefits related to share-based compensation.

SoCalGas

SoCalGas' income tax expense decreased in 2018 due to lower pretax income and a lower ETR. The lower ETR was primarily due to:

- \$69 million lower income tax expense from the lower U.S. statutory corporate federal income tax rate in 2018; **offset by**
- \$21 million income tax expense in 2018 associated with Aliso Canyon natural gas storage facility litigation; and
- lower income tax benefits from flow-through deductions in 2018.

SoCalGas' income tax expense increased in 2017 compared to 2016 primarily due to higher pretax income.

Peruvian Tax Legislation

In December 2016, the Peruvian president, through a presidential decree, enacted income tax law changes that became effective on January 1, 2017. Among other changes, the new law imposed an increase in the corporate income tax rate from 28 percent in 2016 to 29.5 percent in 2017 and beyond, as well as a decrease in the dividend withholding tax rate from 6.8 percent in 2016 to 5 percent in 2017 and beyond. As a result of the increase to the Peruvian corporate income tax rate to 29.5 percent, we remeasured our Peruvian deferred income tax balances, resulting in \$17 million income tax expense recorded in 2016.

Equity Earnings

Equity earnings increased by \$100 million to \$176 million in 2018 primarily due to:

- \$371 million equity earnings, net of income tax, from our investment in Oncor Holdings, which we acquired in March 2018; **offset by**
- \$200 million other-than-temporary impairment of certain wind equity method investments at Sempra Renewables that are included in our plan of sale;
- \$65 million impairment of our RBS Sempra Commodities equity method investment; and
- \$16 million lower equity earnings from the IMG JV at Sempra Mexico, which includes \$32 million lower foreign currency gains in 2018 on its Mexican peso-denominated loans from its JV owners, which is fully offset in Other Income, Net.

The decrease of \$8 million to \$76 million in 2017 compared to 2016 was primarily due to:

- \$64 million equity earnings, net of income tax, in 2016 from IEnova Pipelines, including \$19 million from DEN, prior to IEnova's acquisition of the remaining 50-percent interest in IEnova Pipelines in September 2016; and
- \$13 million equity losses, net of income tax, in 2017 from DEN, prior to IEnova's acquisition of the remaining 50-percent interest in DEN in November 2017, compared to \$5 million of equity earnings, net of income tax, in 2016, primarily from foreign currency and inflation effects; **offset by**
- \$45 million equity earnings, net of income tax, from the IMG JV, primarily due to AFUDC equity and foreign currency effects, offset by interest expense; and
- \$26 million equity losses in 2016 from Sempra LNG & Midstream's investment in Rockies Express, including a \$44 million impairment charge in the first quarter of 2016.

Earnings Attributable to Noncontrolling Interests

Earnings attributable to NCI were \$76 million for 2018 compared to \$94 million for 2017. The net change of \$18 million included:

- \$36 million losses attributable to NCI at Sempra LNG & Midstream in 2018 due to the net impairment of certain non-utility natural gas storage assets; and
- \$35 million higher pretax losses attributed to tax equity investors at Sempra Renewables; **offset by**
- \$59 million higher earnings attributable to NCI at Sempra Mexico in 2018.

Earnings attributable to NCI were \$94 million for 2017 compared to \$148 million for 2016. The net change of \$54 million included:

- \$60 million at Sempra Mexico, primarily due to:
 - \$50 million lower earnings attributable to NCI as a result of the decrease in earnings, excluding the effects of foreign currency and inflation, as we discuss above in “Segment Results – Sempra Mexico,” and
 - \$28 million losses attributable to NCI in 2017 from foreign currency and inflation effects without the corresponding benefit from foreign currency derivatives that are not subject to NCI compared to \$14 million earnings in 2016, *offset by*
 - \$32 million higher earnings attributable to NCI, excluding the effects of foreign currency and inflation, from the decrease in our controlling interest from 81.1 percent to 66.4 percent following IEnova’s equity offering in October 2016, which we discuss in Note 1 of the Notes to Consolidated Financial Statements; and
- \$19 million higher pretax losses attributed to tax equity investors at Sempra Renewables in 2017; **offset by**
- \$14 million earnings at SDG&E compared to \$5 million losses in 2016, primarily due to an increase in operating expenses as a result of scheduled major maintenance at the OMEC plant in 2016.

Mandatory Convertible Preferred Stock Dividends

In the year ended December 31, 2018, our board of directors declared dividends of \$105 million and \$20 million, respectively, on our series A preferred stock and series B preferred stock.

TRANSACTIONS WITH AFFILIATES

We provide information about our related party transactions in Note 1 of the Notes to Consolidated Financial Statements.

IMPACT OF FOREIGN CURRENCY AND INFLATION RATES ON RESULTS OF OPERATIONS

Because our operations in South America and our natural gas distribution utility in Mexico use their local currency as their functional currency, revenues and expenses are translated into U.S. dollars at average exchange rates for the period for consolidation in Sempra Energy Consolidated’s results of operations.

Foreign Currency Translation

Any difference in average exchange rates used for the translation of income statement activity from year to year can cause a variance in Sempra Energy’s comparative results of operations. Changes in foreign currency translation rates between years resulted in a negligible impact in 2018 compared to 2017 and \$6 million higher earnings at Sempra South American Utilities in 2017 compared to 2016.

Transactional Impacts

Some income statement activities at our foreign operations and their JVs are also impacted by transactional gains and losses, which we discuss below. A summary of these foreign currency transactional gains and losses included in our reported results is as follows:

TRANSACTIONAL GAINS (LOSSES) FROM FOREIGN CURRENCY AND INFLATION

(Dollars in millions)

	Total reported amounts			Transactional gains (losses) included in reported amounts		
	Years ended December 31,					
	2018	2017	2016	2018	2017	2016
Other income, net ⁽¹⁾	\$ 72	\$ 233	\$ 138	\$ —	\$ 14	\$ (33)
Income tax expense	(96)	(1,276)	(389)	(20)	(62)	38
Equity earnings	176	76	84	(15)	14	23
Net income	1,126	351	1,519	(35)	(53)	39
Earnings attributable to common shares	924	256	1,370	(21)	(25)	25

⁽¹⁾ Total reported amounts for 2017 and 2016 were adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2 of the Notes to Consolidated Financial Statements.

Foreign Currency Exchange Rate and Inflation Impacts on Income Taxes and Related Hedging Activity

Our Mexican subsidiaries have U.S. dollar-denominated cash balances, receivables, payables and debt (monetary assets and liabilities) that are affected by Mexican currency exchange rate movements for Mexican income tax purposes. They also have deferred income tax assets and liabilities, which are significant, denominated in the Mexican peso that must be translated to U.S. dollars for financial reporting purposes. In addition, monetary assets and liabilities and certain nonmonetary assets and liabilities are adjusted for Mexican inflation for Mexican income tax purposes. As a result, fluctuations in both the currency exchange rate for the Mexican peso against the U.S. dollar and Mexican inflation may expose us to fluctuations in Income Tax Expense, Other Income, Net and Equity Earnings. We use foreign currency derivatives as a means to manage exposure to the currency exchange rate on our monetary assets and liabilities. However, we generally do not hedge our deferred income tax assets and liabilities, which makes us susceptible to volatility in income tax expense caused by exchange rate fluctuations and inflation. The derivative activity impacts Other Income, Net.

The income tax expense of our South American subsidiaries is similarly impacted by inflation and currency exchange rate movements related to U.S. dollar-denominated monetary assets and liabilities.

Other Transactions

Although the financial statements of most of our Mexican subsidiaries and JVs (Energía Sierra Juárez and IMG) have the U.S. dollar as the functional currency, some transactions may be denominated in the local currency; such transactions are remeasured into U.S. dollars. This remeasurement creates transactional gains and losses that are included in Other Income, Net, for our consolidated subsidiaries and in Equity Earnings for our JVs (including IEnova Pipelines until September 26, 2016 and DEN until November 15, 2017).

We utilize cross-currency swaps that exchange our Mexican peso-denominated principal and interest payments into the U.S. dollar and swap Mexican variable interest rates for U.S. fixed interest rates. The impacts of these cross-currency swaps are offset in OCI and are reclassified from AOCI into earnings through Interest Expense as settlements occur.

Certain of our Mexican pipeline projects (namely Los Ramones I at IEnova Pipelines and Los Ramones Norte within our TAG JV) generate revenue based on tariffs that are set by government agencies in Mexico, with contracts denominated in Mexican pesos that are indexed to the U.S. dollar, adjusted annually for inflation and fluctuation in the exchange rate. The resultant gains and losses from remeasuring the local currency amounts into U.S. dollars and the settlement of foreign currency forwards and swaps related to these contracts are included in Revenues: Energy-Related Businesses or Equity Earnings.

Our JVs in Chile (Eletrans) use the U.S. dollar as the functional currency, but have certain construction commitments that are denominated in CLF. Eletrans entered into forward exchange contracts to manage the foreign currency exchange risk of the CLF relative to the U.S. dollar. The forward exchange contracts settle based on anticipated payments to vendors, generally monthly, and ended in 2018, with activity recorded in Equity Earnings.

CAPITAL RESOURCES AND LIQUIDITY

OVERVIEW

We expect to meet our cash requirements through cash flows from operations, unrestricted cash and cash equivalents, proceeds from recent and planned asset sales, borrowings under our credit facilities, distributions from our equity method investments, issuances of debt and equity securities, project financing and other equity sales, including partnering JVs.

Our lines of credit provide liquidity and support commercial paper. As we discuss in Note 7 of the Notes to Consolidated Financial Statements, Sempra Energy, Sempra Global and the California Utilities each have five-year revolving credit facilities expiring in 2020. The table below shows the amount of available funds, including available unused credit on these three credit facilities, at December 31, 2018. Our foreign operations had additional general purpose credit facilities aggregating \$1.8 billion, with approximately \$0.8 billion available unused credit at December 31, 2018.

AVAILABLE FUNDS AT DECEMBER 31, 2018

(Dollars in millions)

	Sempra Energy Consolidated	SDG&E	SoCalGas
Unrestricted cash and cash equivalents ⁽¹⁾	\$ 190	\$ 8	\$ 18
Available unused credit ⁽²⁾⁽³⁾	4,219	453	453

⁽¹⁾ Amounts at Sempra Energy Consolidated included \$141 million held in non-U.S. jurisdictions. We discuss repatriation in "Results of Operations – Changes in Revenues, Costs and Earnings – Income Taxes" above.

⁽²⁾ Available unused credit is the total available on Sempra Energy's, Sempra Global's and the California Utilities' credit facilities that we discuss in Note 7 of the Notes to Consolidated Financial Statements. Borrowings on the shared line of credit at SDG&E and SoCalGas are limited to \$750 million for each utility and a combined total of \$1 billion. The available balance at each of the California Utilities assumes no additional borrowings by the other.

⁽³⁾ Because the commercial paper programs are supported by these lines, we reflect the amount of commercial paper outstanding as a reduction to the available unused credit.

Sempra Energy Consolidated

We believe that these available funds, combined with cash flows from operations, proceeds from recent and planned asset sales, distributions from our equity method investments, issuances of debt and equity securities, project financing and other equity sales, including partnering in JVs, will be adequate to fund our current operations, including to:

- finance capital expenditures;
- meet liquidity requirements;
- fund dividends;
- fund new business or asset acquisitions or start-ups;
- fund capital contribution requirements;
- repay maturing long-term debt; and
- fund expenditures related to the natural gas leak at SoCalGas' Aliso Canyon natural gas storage facility.

Sempra Energy and the California Utilities currently have ready access to the long-term debt markets and are not currently constrained in their ability to borrow at reasonable rates. However, changing economic conditions and our financing activities could negatively affect the availability and cost of both short-term and long-term financing. Also, cash flows from operations may be impacted by the timing of commencement and completion of large projects. If cash flows from operations were to be significantly reduced or we were unable to borrow under acceptable terms, we would likely first reduce or postpone discretionary capital expenditures (not related to safety) and investments in new businesses. If these measures were necessary, they would primarily impact our Sempra Mexico and Sempra LNG & Midstream businesses before we would reduce funds necessary for the ongoing needs of our utilities. We used the \$1.6 billion in cash proceeds received from Sempra Renewables' sale to a subsidiary of Con Ed, which we discuss in Note 5 of the Notes to Consolidated Financial Statements, to temporarily pay down commercial paper, pending the close of Oncor's and our agreements to purchase InfraREIT and a 50-percent interest in Sharyland Holdings, LP, respectively, as described below. We monitor our ability to finance the needs of our operating, investing and financing activities in a manner consistent with our intention to maintain our investment-grade credit ratings and capital structure.

We have significant investments in several trusts to provide for future payments of pensions and other postretirement benefits, and nuclear decommissioning. Changes in asset values, which are dependent on the activity in the equity and fixed income markets, have not affected the trust funds' abilities to make required payments. However, changes in asset values, along with a number of other factors such as changes to discount rates, assumed rates of return, mortality tables, and regulations, may impact funding requirements for pension and other postretirement benefit plans and SDG&E's NDT. At the California Utilities, funding requirements are generally recoverable in rates.

We discuss matters regarding Sempra Energy, SDG&E and SoCalGas common stock dividends below in "Dividends."

Short-Term Borrowings

We use short-term debt primarily to meet liquidity requirements, fund shareholder dividends, and temporarily finance capital expenditures, acquisitions or start-ups. Our corporate short-term, unsecured promissory notes, or commercial paper, were our primary sources of short-term debt funding in 2018. Our California Utilities use short-term debt primarily to meet working capital needs.

The following table shows selected statistics for our commercial paper borrowings for 2018:

COMMERCIAL PAPER STATISTICS			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated	SDG&E	SoCalGas
Amount outstanding at December 31, 2018	\$ 1,216	\$ 291	\$ 256
Weighted-average interest rate at December 31, 2018	2.786%	2.968%	2.581%
Maximum month-end amount outstanding during 2018 ⁽¹⁾	\$ 3,913	\$ 458	\$ 345
Monthly weighted-average amount outstanding during 2018	\$ 2,556	\$ 235	\$ 179
Monthly weighted-average interest rate during 2018	2.358%	1.969%	1.987%

⁽¹⁾ The largest amount outstanding at the end of the last day of any month during the year.

Impacts of the TCJA

In the fourth quarter of 2017, we recorded the effects of the TCJA, resulting in an increase to income tax expense of \$870 million at Sempra Energy Consolidated. In 2018, we recorded \$85 million income tax expense when we adjusted our 2017 provisional estimates. Although there was no cash impact in 2017 or 2018, these effects represent potential future tax payments or other cash outflow and, in the case of SDG&E and SoCalGas, the remeasurement of their U.S. federal deferred income tax balances will result in cash outflow primarily for refunds to ratepayers in the future. We used a portion of our existing NOLs to offset the deemed repatriation tax.

Certain financial metrics used by credit rating agencies, such as our funds from operations-to-debt percentage, could be negatively impacted as a result of certain provisions of the TCJA and in particular by an anticipated decrease in income tax reimbursement payments to us from SDG&E and SoCalGas due the reduction in the U.S. statutory corporate income tax rate to 21 percent.

Certain provisions of the TCJA, such as 100-percent expensing of capital expenditures and impacts on utilization of our NOLs, may also influence how we fund capital expenditures, the timing of capital expenditures and possible redeployment of capital through sales or monetization of assets, the timing of repatriation of foreign earnings and the use of equity financing to reduce our future use of debt.

As we discuss in Note 8 of the Notes to Consolidated Financial Statements and above in "Changes in Revenues, Costs and Earnings – Income Taxes," our analysis and interpretation of the effects of the TCJA and our assessment of strategies to manage the cash and earnings impacts on our businesses are ongoing.

Loans to/from Affiliates

At December 31, 2018, Sempra Energy has outstanding loans to unconsolidated affiliates totaling \$688 million and a \$37 million loan from an unconsolidated affiliate, which we discuss in Note 1 of the Notes to Consolidated Financial Statements.

California Utilities

SDG&E and SoCalGas expect that the available unused credit described above, cash flows from operations, and debt issuances will continue to be adequate to fund their respective operations. The California Utilities manage their capital structure and pay dividends when appropriate and as approved by their respective boards of directors.

As we discuss in Note 4 of the Notes to Consolidated Financial Statements, changes in balancing accounts for significant costs at SDG&E and SoCalGas, particularly a change between over- and undercollected status, may have a significant impact on cash flows, as these changes generally represent the difference between when costs are incurred and when they are ultimately recovered in rates through billings to customers.

SDG&E's and SoCalGas' balancing accounts include some or all of the following:

- Energy Resource Recovery Balancing Account (ERRA) – tracks the difference between amounts billed to customers and the actual cost of electric fuel and purchased power. SDG&E's ERRA balance was undercollected by \$50 million and \$51 million at December 31, 2018 and 2017, respectively.
- Electric Distribution Fixed Cost Account (EDFCA) – tracks the difference between amounts billed to customers and the authorized margin and other costs allocated to electric distribution customers. SDG&E's EDFCA balance was undercollected by \$43 million and \$112 million at December 31, 2018 and 2017, respectively. The decrease in undercollection was mainly due to customer consumption and electric rates alignment.
- Core Fixed Cost Account (CFCA) – tracks the difference between amounts billed to customers and the authorized margin and other costs allocated to core customers. Because mild weather experienced in 2018 and 2017 resulted in lower natural gas consumption compared to authorized levels, SDG&E's CFCA balance was undercollected by \$51 million and \$26 million at December 31, 2018 and 2017, respectively, and SoCalGas' CFCA balance was undercollected by \$177 million and \$164 million at December 31, 2018 and 2017, respectively.

SDG&E

SDG&E has a tolling agreement to purchase power generated at OMEC, a 605-MW generating facility. A related agreement provided SDG&E with the option to purchase OMEC at a predetermined price (referred to as the call option). SDG&E's call option has expired unexercised. Under the terms of the agreement, OMEC LLC can require SDG&E to purchase the power plant for \$280 million, subject to adjustments, on or before October 3, 2019 (referred to as the put option), or upon earlier termination of the PPA.

In October 2018, SDG&E and OMEC LLC signed a resource adequacy capacity agreement for a term that would commence at the expiration of the current tolling agreement in October 2019 and end in August 2024. The capacity agreement was approved by OMEC LLC's lenders in December 2018, but is contingent upon receiving final and non-appealable approval from the CPUC before the expiration of the put option on April 1, 2019. If a timely final and non-appealable approval of the resource adequacy capacity agreement is received, OMEC LLC will waive its right to exercise the put option and, as a result, SDG&E would no longer consolidate Otay Mesa VIE. SDG&E received CPUC approval of the resource adequacy capacity agreement in February 2019 and the period for appeal expires on March 25, 2019.

SoCalGas

Aliso Canyon Natural Gas Storage Facility Gas Leak

We provide information on the natural gas leak at the Aliso Canyon natural gas storage facility in Note 16 of the Notes to Consolidated Financial Statements, in "Factors Influencing Future Performance" below, and in "Item 1A. Risk Factors." The costs of defending against the related civil and criminal lawsuits and cooperating with related investigations, and any damages, restitution, and civil, administrative and criminal fines, costs and other penalties, if awarded or imposed, as well as costs of mitigating the actual natural gas released, could be significant, and to the extent not covered by insurance (including any costs in excess of applicable policy limits), if there were to be significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are not tax deductible, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations. Also, higher operating costs and additional capital expenditures incurred by SoCalGas as a result of new laws, orders, rules and regulations arising out of this incident or our responses thereto could be significant and may not be recoverable in customer rates, which may have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

The costs incurred to remediate and stop the Leak and to mitigate local community impacts are significant and may increase, and to the extent not covered by insurance (including any costs in excess of applicable policy limits), if there were to be significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are

not tax deductible, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Sempra Texas Utility

Acquisition of Oncor Holdings

As we discuss in Note 5 of the Notes to Consolidated Financial Statements, on March 9, 2018, Sempra Energy completed transactions resulting in the acquisition of an indirect ownership of an 80.25-percent interest in Oncor for a total purchase price paid of \$9.57 billion, including Merger Consideration of \$9.45 billion.

As we discuss in Notes 7, 13 and 14 of the Notes to Consolidated Financial Statements, our registered public offerings of common stock (not including shares offered pursuant to forward sale agreements), series A preferred stock and long-term debt completed in January 2018 provided total initial net proceeds of approximately \$7.0 billion for partial funding of the Merger Consideration, of which approximately \$800 million was used to pay down commercial paper, pending the closing of the Merger.

In March 2018, to fund a portion of the Merger Consideration, we issued approximately \$900 million (net of underwriting discounts) of common equity through settlement of forward sales under the forward sale agreements and raised the remaining portion of the Merger Consideration through issuances of approximately \$2.6 billion in commercial paper, with a weighted-average maturity of 47 days and a weighted-average interest rate of 2.2 percent per annum.

Upon closing of the Merger, our funding of the total purchase price was comprised of approximately 31 percent equity and approximately 69 percent debt, which does not include shares that have since been settled and that we expect to settle in our common stock pursuant to forward sale agreements. We intend to ultimately fund the total purchase price with approximately 65 percent equity and approximately 35 percent debt.

In June 2018, we issued approximately \$800 million (net of underwriting discounts) of common equity through settlement of forward sales under the forward sale agreements and used the proceeds from these settlements to repay long-term debt maturing in June 2018 and to repay commercial paper used to fund a portion of the Merger Consideration.

In July 2018, we raised additional net proceeds of approximately \$729 million through sales of \$565 million of series B preferred stock and \$164 million of common stock (not including shares offered pursuant to forward sale agreements).

The January 2018 and July 2018 forward sale agreements permit us to elect cash settlement or net share settlement for all or a portion of our obligations under the forward sale agreements. We expect to settle the forward sale agreements entirely by the physical delivery of shares of our common stock in exchange for cash proceeds. As of February 26, 2019, at the initial forward sale price of approximately \$105.07 per share in January 2018 and approximately \$111.87 per share in July 2018, we expect that the net proceeds from full physical settlement of the remaining forward sale agreements would be approximately \$1.8 billion (net of underwriting discounts, but before deducting equity issuance costs, and subject to certain adjustments pursuant to the forward sale agreements). Assuming physical settlement of all outstanding forward sales agreements, we will have achieved funding the total purchase price with approximately 65 percent equity.

If we do not physically settle all the forward settlement agreements, we may use cash from operations and proceeds from asset sales in place of some equity financing. Some of the equity financing subsequent to the Merger (including proceeds we receive from the settlement of the remaining portion of our forward sale agreements and from other sales of common stock) may be used to repay indebtedness incurred to finance a portion of the total purchase price. If we were to elect cash settlement or net share settlement, the amount of cash proceeds we receive upon settlement would differ, perhaps substantially, or we may not receive any cash proceeds or we may deliver cash (in an amount which could be significant) or shares of our common stock to the forward purchasers. We expect to settle the remaining portion of the forward sale agreements in one or more settlements no later than December 15, 2019, which is the final settlement date under the agreements.

Oncor's business is capital intensive, and it relies on external financing as a significant source of liquidity for its capital requirements. In the past, Oncor has financed a substantial portion of its cash needs with the proceeds from indebtedness. In the event that Oncor fails to meet its capital requirements, we may be required to make additional investments in Oncor, or if Oncor is unable to access sufficient capital to finance its ongoing needs, we may elect to make additional investments in Oncor which could be substantial and which would reduce the cash available to us for other purposes, could increase our indebtedness and could ultimately materially adversely affect our results of operations, financial condition and prospects. In that regard, our commitments to the PUCT prohibit us from making loans to Oncor. As a result, if Oncor requires additional financing and cannot obtain it from other sources, we may be required to make a capital contribution, rather than a loan, to Oncor.

Commensurate with our ownership interest, we contributed to Oncor \$230 million in cash in 2018. In 2018, Oncor's board of directors declared dividends of \$209 million, of which \$167 million is Oncor Holdings' commensurate share. In 2018, Oncor Holdings distributed the \$167 million to Sempra Energy in the form of dividends of \$149 million and tax sharing payments of \$18 million.

In February 2019, Oncor's board of directors declared dividends of \$71 million and Oncor Holdings' board of directors declared dividends of \$54 million. In February 2019, Sempra Energy contributed \$56 million to Oncor.

We provide additional discussion regarding the Merger and financing risks below in "Factors Influencing Future Performance," and in "Item 1A. Risk Factors."

On October 18, 2018, Sempra Energy committed to make a capital contribution to Oncor for Oncor to fund its acquisition of InfraREIT, which acquisition we expect will close in mid-2019. We estimate the capital contribution to be \$1,025 million, excluding our share of approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition. The capital contribution is contingent on the satisfaction of customary conditions, including the substantially simultaneous closing of the transactions contemplated by the InfraREIT Merger Agreement. We discuss these transactions in Note 5 of the Notes to Consolidated Financial Statements and below in "Factors Influencing Future Performance."

Sempra South American Utilities

We expect to fund operations at Chilquinta Energía and Luz del Sur and dividends at Luz del Sur with available funds, including credit facilities, funds internally generated by those businesses, issuances of corporate bonds and other external borrowings.

On January 25, 2019, our board of directors approved a plan to market and sell our South American businesses. We expect to complete the sales process by the end of 2019.

Sempra Mexico

We expect to fund operations and dividends at IEnova with available funds, including credit facilities, and funds internally generated by the Sempra Mexico businesses, as well as funds from IEnova's securities issuances, project financing, interim funding from the parent or affiliates, and partnering in JVs.

In 2018, 2017 and 2016, IEnova paid dividends of \$71 million, \$67 million and \$26 million, respectively, to its minority shareholders.

IEnova's shareholders approved the formation of a fund for IEnova to repurchase its own shares of common stock for a maximum amount of \$250 million in U.S. dollars in 2018. Repurchases shall not exceed IEnova's total net profits, including retained earnings, as stated in their 2017 financial statements. In the fourth quarter of 2018, IEnova repurchased 2,000,000 shares of its outstanding common stock held by NCI for approximately \$7 million, resulting in an increase in Sempra Energy's ownership interest in IEnova from 66.4 percent to 66.5 percent. In February 2019, IEnova repurchased an additional 1,600,000 shares for approximately \$6 million.

Sempra Renewables

As we discuss in Notes 5 and 12 of the Notes to Consolidated Financial Statements and below in "Factors Influencing Future Performance," on June 25, 2018, our board of directors approved a plan to sell our entire portfolio of U.S. wind and U.S. solar assets. In December 2018, Sempra Renewables completed the sale of all its operating solar assets, its solar and battery storage development projects, and one wind generation facility for \$1.6 billion. In February 2019, Sempra Renewables entered into an agreement to sell its remaining wind assets and investments for \$551 million, subject to working capital adjustments and customary closing conditions. We expect to complete the sale in the second quarter of 2019.

Sempra LNG & Midstream

On February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners. Sempra LNG & Midstream received cash proceeds of \$328 million (subject to working capital adjustments and Sempra LNG & Midstream's purchase for \$20 million of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale), which we discuss in "Item 1. Business" and in Note 5 of the Notes to Consolidated Financial Statements.

We expect Sempra LNG & Midstream to require funding for the development and expansion of its remaining portfolio of projects, which may be financed through a combination of operating cash flow, funding from the parent, project financing and partnering in JVs.

Sempra LNG & Midstream, through its interest in Cameron LNG JV, is developing a natural gas liquefaction export facility at the Cameron LNG JV terminal. The majority of the current three-train liquefaction project is project-financed, with most or all of the remainder of the capital requirements to be provided by the project partners, including Sempra Energy, through equity contributions under the project equity agreements. We expect that our remaining equity requirements to complete the project will be met by a combination of our share of cash generated from each liquefaction train as it comes on line and additional cash contributions. Sempra Energy signed guarantees for 50.2 percent of Cameron LNG JV's obligations under the financing agreements for a maximum amount of up to \$3.9 billion. The project financing and guarantees became effective on October 1, 2014, the effective date of the JV formation. The guarantees will terminate upon satisfaction of certain conditions, including all three trains achieving commercial operation and meeting certain operational performance tests. We anticipate that the guarantees will be terminated approximately nine months after all three trains achieve commercial operation.

We discuss Cameron LNG JV and the JV financing further in Note 6 of the Notes to Consolidated Financial Statements, below in "Factors Influencing Future Performance," and in "Item 1A. Risk Factors."

CASH FLOWS FROM OPERATING ACTIVITIES

CASH PROVIDED BY OPERATING ACTIVITIES							
<i>(Dollars in millions)</i>							
	2018	2018 change		2017	2017 change		2016
Sempra Energy Consolidated	\$ 3,447	\$ (178)	(5)%	\$ 3,625	\$ 1,314	57%	\$ 2,311
SDG&E	1,584	37	2	1,547	224	17	1,323
SoCalGas	1,013	(293)	(22)	1,306	635	95	671

Sempra Energy Consolidated

Cash provided by operating activities at Sempra Energy decreased in 2018 primarily due to:

- \$43 million net increase in Insurance Receivable for Aliso Canyon Costs in 2018 compared to a \$188 million net decrease in 2017. The \$43 million net increase in 2018 primarily includes \$142 million of additional accruals, partially offset by \$97 million in insurance proceeds received. We discuss the Aliso Canyon natural gas storage facility leak further in Note 16 of the Notes to Consolidated Financial Statements;
- \$198 million lower net income, adjusted for noncash items included in earnings, in 2018 compared to 2017, primarily due to higher interest payments in 2018;
- \$144 million increase in accounts receivable in 2018 compared to a \$17 million decrease in 2017; and
- \$258 million purchases of GHG allowances in 2018 compared to \$97 million in 2017; **offset by**
- \$83 million decrease in income taxes receivable in 2018 compared to a \$70 million increase in 2017;
- \$124 million decrease in net undercollected regulatory balancing accounts (including long-term amounts included in regulatory assets) at SDG&E in 2018 compared to a \$28 million increase in 2017. Over- and undercollected regulatory balancing accounts reflect the difference between customer billings and recorded or CPUC-authorized costs. These differences are required to be balanced over time;
- \$149 million of dividends received from Oncor Holdings in 2018; and
- \$143 million increase in deferred revenue requirement due to the TCJA at the California Utilities in 2018.

Cash provided by operating activities at Sempra Energy increased in 2017 primarily due to:

- \$1.1 billion higher net income, adjusted for noncash items included in earnings, in 2017 compared to 2016, primarily due to improved results at our operating segments;
- \$188 million net decrease in Insurance Receivable for Aliso Canyon Costs in 2017 compared to a \$281 million net increase in 2016. The \$188 million net decrease in 2017 primarily includes \$300 million in insurance proceeds received, offset by \$112 million of additional accruals;
- \$31 million net increase in Reserve for Aliso Canyon Costs in 2017 compared to a \$221 million net decrease in 2016. The \$31 million net increase in 2017 includes \$130 million of additional accruals (including \$20 million of litigation reserves charged to earnings), offset by \$99 million of cash paid;

- \$66 million decrease in NDT at SDG&E in 2017 as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in the current year; and
- \$17 million decrease in accounts receivable in 2017 compared to a \$42 million increase in 2016; **offset by**
- \$54 million increase in net overcollected regulatory balancing accounts (including long-term amounts included in regulatory assets) at SoCalGas in 2017 compared to a \$293 million increase in 2016;
- \$145 million increase in permanent pipeline capacity release liability at Sempra LNG & Midstream in 2016;
- \$28 million increase in net undercollected regulatory balancing accounts (including long-term amounts included in regulatory assets) at SDG&E in 2017 compared to a \$55 million decrease in 2016;
- \$70 million increase in income taxes receivable in 2017 compared to a \$3 million decrease in 2016; and
- \$83 million increase in accounts payable in 2017 compared to a \$122 million increase in 2016.

SDG&E

Cash provided by operating activities at SDG&E increased in 2018 primarily due to:

- \$124 million decrease in net undercollected regulatory balancing accounts (including long-term amounts included in regulatory assets) in 2018 compared to a \$28 million increase in 2017;
- \$30 million decrease in accounts receivable in 2018 compared to a \$76 million increase in 2017; and
- \$75 million increase in deferred revenue requirement due to the TCJA in 2018; **offset by**
- \$23 million decrease in income taxes receivable in 2018 compared to a \$136 million decrease in 2017, primarily due to timing of tax payments;
- \$96 million purchases of GHG allowances in 2018 compared to \$15 million in 2017;
- \$1 million decrease in accounts payable in 2018 compared to a \$75 million increase in 2017; and
- \$22 million lower net income, adjusted for noncash items included in earnings, in 2018 compared to 2017.

Cash provided by operating activities at SDG&E increased in 2017 primarily due to:

- \$136 million decrease in income taxes receivable in 2017 compared to a \$115 million increase in 2016, primarily due to timing of tax payments;
- \$66 million decrease in NDT in 2017 as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in the current year;
- \$15 million in purchases of GHG allowances in 2017 compared to \$58 million in 2016; and
- \$75 million increase in accounts payable in 2017 compared to a \$39 million increase in 2016; **offset by**
- \$28 million increase in net undercollected regulatory balancing accounts (including long-term amounts included in regulatory assets) in 2017 compared to a \$55 million decrease in 2016;
- \$76 million increase in accounts receivable in 2017 compared to a \$31 million increase in 2016; and
- \$23 million lower net income, adjusted for noncash items included in earnings, in 2017 compared to 2016.

SoCalGas

Cash provided by operating activities at SoCalGas decreased in 2018 primarily due to:

- \$43 million net increase in Insurance Receivable for Aliso Canyon Costs in 2018 compared to a \$188 million net decrease in 2017. The \$43 million net increase in 2018 primarily includes \$142 million of additional accruals, partially offset by \$97 million in insurance proceeds received;
- \$87 million increase in accounts receivable in 2018 compared to a \$72 million decrease in 2017; and
- \$142 million purchases of GHG allowances in 2018 compared to \$78 million in 2017; **offset by**
- \$68 million increase in deferred revenue requirement due to the TCJA in 2018; and
- \$2 million increase in inventory in 2018 compared to a \$66 million increase in 2017.

Cash provided by operating activities at SoCalGas increased in 2017 primarily due to:

- \$188 million net decrease in Insurance Receivable for Aliso Canyon Costs in 2017 compared to a \$281 million net increase in 2016. The \$188 million net decrease in 2017 primarily includes \$300 million in insurance proceeds received, offset by \$112 million of additional accruals;
- \$31 million net increase in Reserve for Aliso Canyon Costs in 2017 compared to a \$221 million net decrease in 2016. The \$31 million net increase in 2017 includes \$130 million of additional accruals (including \$20 million of litigation reserves charged to earnings), offset by \$99 million of cash paid;
- \$135 million higher net income, adjusted for noncash items included in earnings, in 2017 compared to 2016;

- \$20 million net source of cash due to changes in other current assets and liabilities in 2017 compared to a \$38 million net use of cash in 2016; and
- \$72 million decrease in accounts receivable in 2017 compared to a \$37 million decrease in 2016; **offset by**
- \$54 million increase in net overcollected regulatory balancing accounts (including long-term amounts included in regulatory assets) in 2017 compared to a \$293 million increase in 2016; and
- \$66 million increase in inventory in 2017 compared to a \$4 million decrease in 2016.

CASH FLOWS FROM INVESTING ACTIVITIES

CASH USED IN INVESTING ACTIVITIES							
<i>(Dollars in millions)</i>							
	2018	2018 change		2017	2017 change		2016
Sempra Energy Consolidated	\$ (12,557)	\$ 7,857	167%	\$ (4,700)	\$ (135)	(3)%	\$ (4,835)
SDG&E	(1,542)	27	2	(1,515)	191	14	(1,324)
SoCalGas	(1,531)	168	12	(1,363)	94	7	(1,269)

Sempra Energy Consolidated

Cash used in investing activities at Sempra Energy increased in 2018 primarily due to:

- \$10.1 billion increase in expenditures for investments and acquisitions, the details of which are included in the “Expenditures for Investments and Acquisitions” table below; **offset by**
- \$1.6 billion net proceeds received from the sale of certain of our non-utility U.S. renewables assets, as we discuss in Note 5 of the Notes to Consolidated Financial Statements;
- \$429 million lower advances to unconsolidated affiliates; and
- \$165 million decrease in capital expenditures, the details of which are included in the “Expenditures for PP&E” table below.

Cash used in investing activities at Sempra Energy decreased in 2017 primarily due to:

- \$1.2 billion decrease in expenditures for investments and acquisitions; and
- \$265 million decrease in capital expenditures; **offset by**
- \$506 million higher advances to unconsolidated affiliates, mainly to the IMG JV to finance construction of a natural gas marine pipeline;
- \$443 million net proceeds received from Sempra LNG & Midstream’s sale of its 25-percent interest in Rockies Express in 2016;
- \$318 million net proceeds received from Sempra LNG & Midstream’s sale of EnergySouth in 2016; and
- \$100 million decrease in NDT assets in 2016 as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in prior years.

SDG&E

Cash used in investing activities at SDG&E in 2018 was comparable to 2017.

Cash used in investing activities at SDG&E increased in 2017 primarily due to:

- \$156 million increase in capital expenditures; and
- \$100 million decrease in NDT assets in 2016 as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in prior years; **offset by**
- \$31 million decrease in advances to Sempra Energy in 2017 compared to a \$31 million increase in 2016.

SoCalGas

Cash used in investing activities at SoCalGas increased in 2018 primarily due to a \$171 million increase in capital expenditures.

Cash used in investing activities at SoCalGas increased in 2017 primarily due to:

- \$50 million net decrease in advances to Sempra Energy in 2016; and
- \$48 million increase in capital expenditures.

CAPITAL EXPENDITURES AND INVESTMENTS

Sempra Energy Consolidated Expenditures for PP&E

The following table summarizes capital expenditures for the last three years.

EXPENDITURES FOR PP&E (Dollars in millions)	Years ended December 31,		
	2018	2017	2016
SDG&E:			
Improvements to electric and natural gas distribution systems, including certain pipeline safety and generation systems	\$ 1,020	\$ 966	\$ 727
Improvements to electric transmission systems	496	527	513
PSEP	16	48	121
Electric generation plants and equipment	10	14	38
SoCalGas:			
Improvements to natural gas distribution, transmission and storage systems, and for certain pipeline safety	1,359	1,145	932
PSEP	168	194	292
Advanced metering infrastructure	11	28	95
Sempra South American Utilities:			
Improvements to electric transmission and distribution systems and generation projects in Peru	157	151	134
Improvements to electric transmission and distribution infrastructure in Chile	83	93	60
Sempra Mexico:			
Construction of renewables projects	172	6	—
Construction of natural gas pipeline projects and other capital expenditures	113	242	330
Construction of liquid fuels terminal	83	—	—
Sempra Renewables:			
Construction of solar projects	45	364	637
Construction of wind projects	6	133	198
Sempra LNG & Midstream:			
LNG liquefaction development costs and Cameron Interstate Pipeline expansion	28	18	98
Other	3	2	19
Parent and other	14	18	20
Total	\$ 3,784	\$ 3,949	\$ 4,214

Sempra Energy Consolidated Investments and Acquisitions

The table below presents our investments in various JVs and other businesses.

EXPENDITURES FOR INVESTMENTS AND ACQUISITIONS⁽¹⁾			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2018	2017	2016
Sempra Texas Utility:			
Oncor Holdings – acquisition	\$ 9,227	\$ —	\$ —
Oncor Holdings – capital contributions	230	—	—
Sempra South American Utilities:			
CTNG – acquisition	208	—	—
Eletrans	—	1	—
Sempra Mexico:			
DEN	—	147	—
IEnova Pipelines	—	—	1,078
IMG	80	72	100
Ventika	—	—	242
Manzanillo	16	—	—
Other	4	—	—
Sempra Renewables:			
Expenditures for wind projects	5	—	21
Other	—	—	15
Sempra LNG & Midstream:			
Cameron LNG JV ⁽²⁾	275	48	47
Parent and other	331	2	1
Total	\$ 10,376	\$ 270	\$ 1,504

⁽¹⁾ Net of cash, cash equivalents and restricted cash acquired.

⁽²⁾ Includes capitalized interest of \$47 million in each of 2018, 2017 and 2016 on Sempra LNG & Midstream's investment, as the JV has not commenced planned principal operations.

Future Construction Expenditures and Investments

The amounts and timing of capital expenditures and certain investments are generally subject to approvals by various regulatory and other governmental and environmental bodies, including the CPUC and the FERC. In 2019, we expect to make capital expenditures and investments of approximately \$6.1 billion, as summarized in the following table.

FUTURE CONSTRUCTION EXPENDITURES AND INVESTMENTS	
<i>(Dollars in millions)</i>	
	Year ended December 31, 2019
SDG&E:	
Improvements to electric and natural gas distribution systems, including certain pipeline safety and generation systems	\$ 1,250
Improvements to electric transmission systems	350
SoCalGas:	
Improvements to natural gas distribution, transmission and storage systems, and for certain pipeline safety	1,250
PSEP	250
Sempra Texas Utility:	
Oncor Holdings – capital contributions	1,570
Acquisition of 50-percent interest in Sharyland Holdings, LP.	110
Sempra South American Utilities:	
Improvements to electric transmission and distribution systems and generation projects in Peru	140
Improvements to electric transmission and distribution infrastructure in Chile	170
Sempra Mexico:	
Construction of liquid fuels terminals	410
Construction of natural gas pipeline projects and other capital expenditures	180
Construction of renewables projects	160
Sempra LNG & Midstream:	
LNG liquefaction development costs	250
Total	\$ 6,090

We discuss significant capital projects, planned and in progress, at each of our segments in “Factors Influencing Future Performance” below.

Over the next five years, 2019 through 2023, and subject to the factors described below which could cause these estimates to vary substantially, Sempra Energy expects to make aggregate capital expenditures and investments of approximately \$13.3 billion at the California Utilities and \$4.9 billion at its other subsidiaries.

Capital expenditure amounts include capitalized interest. At the California Utilities, the amounts also include the portion of AFUDC related to debt, but exclude the portion of AFUDC related to equity. At Sempra Mexico the amounts also exclude AFUDC related to equity. We provide further details about AFUDC in Note 1 of the Notes to Consolidated Financial Statements.

Periodically, we review our construction, investment and financing programs and revise them in response to changes in regulation, economic conditions, competition, customer growth, inflation, customer rates, the cost and availability of capital, and safety and environmental requirements. We discuss these considerations in more detail in Notes 4, 15 and 16 of the Notes to Consolidated Financial Statements.

Our level of capital expenditures and investments in the next few years may vary substantially and will depend on the cost and availability of financing, regulatory approvals, changes in U.S. federal tax law and business opportunities providing desirable rates of return. We intend to finance our capital expenditures in a manner that will maintain our investment-grade credit ratings and capital structure.

CASH FLOWS FROM FINANCING ACTIVITIES

CASH FLOWS FROM FINANCING ACTIVITIES

(Dollars in millions)

	2018	2018 change	2017	2017 change	2016
Sempra Energy Consolidated	\$ 9,006	\$ 7,999	\$ 1,007	\$ (1,495)	\$ 2,502
SDG&E	(34)	(11)	(23)	(1)	(22)
SoCalGas	528	475	53	(499)	552

Sempra Energy Consolidated

Cash provided by financing activities at Sempra Energy increased in 2018 primarily due to:

- \$4.7 billion higher issuances of debt with maturities greater than 90 days, primarily to fund the acquisition of our investment in Oncor Holdings in March 2018, as we discuss in Notes 5 and 7 of the Notes to Consolidated Financial Statements, including:
 - \$3.8 billion for long-term debt (\$6.7 billion in 2018 compared to \$2.9 billion in 2017), and
 - \$901 million for commercial paper and other short-term debt (\$2.5 billion in 2018 compared to \$1.6 billion in 2017);
- \$2.3 billion proceeds, net of offering costs, from issuances of mandatory convertible preferred stock in 2018; and
- \$2.3 billion proceeds, net of offering costs, from issuances of common stock in 2018; **offset by**
- \$710 million higher payments of debt with maturities greater than 90 days, including:
 - \$792 million higher payments for long-term debt (\$1.7 billion in 2018 compared to \$906 million in 2017), *offset by*
 - \$82 million lower payments for commercial paper and other short-term debt (\$1.8 billion in 2018 compared to \$1.9 billion in 2017); and
- \$211 million higher dividends paid in 2018, including \$122 million for common stock and \$89 million for mandatory convertible preferred stock.

Cash provided by financing activities at Sempra Energy decreased in 2017 compared to 2016 primarily due to:

- \$1.2 billion proceeds received in 2016 from the IEnova follow-on common stock offerings, net of offering costs and Sempra Energy's participation;
- \$743 million higher payments on debt with maturities greater than 90 days, including:
 - \$828 million higher payments of commercial paper and other short-term debt (\$1.9 billion in 2017 compared to \$1.07 billion in 2016), *offset by*
 - \$85 million lower payments on long-term debt (\$906 million in 2017 compared to \$991 million in 2016);
- \$36 million net decrease in short-term debt in 2017 compared to a \$692 million net increase in 2016;
- \$196 million net proceeds from tax equity funding from certain wind and solar power generation projects at Sempra Renewables in 2017 compared to \$474 million in 2016;
- \$69 million increase in common stock dividends paid in 2017; and
- \$67 million increase in net distributions to NCI; **offset by**
- \$1.6 billion higher issuances of debt with maturities greater than 90 days, including:
 - \$1.4 billion for long-term debt (\$2.9 billion in 2017 compared to \$1.5 billion in 2016), and
 - \$172 million for commercial paper and other short-term debt (\$1.6 billion in 2017 compared to \$1.4 billion in 2016.)

SDG&E

Cash used in financing activities at SDG&E in 2018 increased primarily due to:

- \$215 million lower increase in short-term debt in 2018; and
- \$10 million cash used in 2018 associated with Otay Mesa VIE, including:
 - \$295 million early repayment of OMEC's project financing loan by OMEC LLC, *offset by*
 - \$220 million issuance of long-term debt by OMEC LLC, and
 - \$65 million capital contribution from OMEC LLC to partially repay the \$295 million project financing loan; **offset by**
- \$200 million decrease in common dividends paid in 2018.

Cash used in financing activities at SDG&E increased in 2017 compared to 2016 primarily due to:

- \$275 million increase in common stock dividends paid in 2017; and
- \$100 million lower issuances of long-term debt in 2017; **offset by**
- \$253 million net increase in short-term debt in 2017 compared to a \$114 million net decrease in 2016.

SoCalGas

Net cash provided by financing activities at SoCalGas increased in 2018 primarily due to:

- \$949 million issuances of long-term debt in 2018; **offset by**
- \$500 million payments on long-term debt in 2018.

Cash provided by financing activities at SoCalGas decreased in 2017 primarily due to a \$499 million issuance of long-term debt in 2016.

Long-Term Debt

LONG-TERM DEBT⁽¹⁾ *(Dollars in millions)*

	December 31,			Weighted-average at December 31, 2018	
	2018	2017	2016	Maturity (in years)	Interest rate
Sempra Energy Consolidated	\$ 23,284	\$ 17,872	\$ 15,342	12.0	4.02%
SDG&E	6,219	5,555	4,849	16.0	4.32
SoCalGas	3,430	2,986	2,982	18.1	3.89

⁽¹⁾ Includes current portion of long-term debt.

Issuances of Long-Term Debt

Major issuances of long-term debt in the last three years included the following:

ISSUANCES OF LONG-TERM DEBT

(Dollars in millions)

	Amount at issuance	Maturity
2018:		
Sempra Energy variable rate notes	\$ 500	2019
Sempra Energy 2.4% notes	500	2020
Sempra Energy variable rate notes	700	2021
Sempra Energy 2.9% notes	500	2023
Sempra Energy 3.4% notes	1,000	2028
Sempra Energy 3.8% notes	1,000	2038
Sempra Energy 4% notes	800	2048
SDG&E – OMEC LLC variable-rate loan	220	2024
SDG&E 4.15% first mortgage bonds	400	2048
SoCalGas 4.125% first mortgage bonds	400	2048
SoCalGas 4.3% first mortgage bonds	550	2049
Luz del Sur 7% corporate bonds	50	2028
Luz del Sur 4.3%-5.7% bank loans	107	2020-2021
2017:		
Sempra Energy variable rate notes	850	2021
Sempra Energy 3.25% notes	750	2027
SDG&E 3.75% first mortgage bonds	400	2047
Luz del Sur 6.375% corporate bonds	50	2023
Luz del Sur 5.9375% corporate bonds	50	2027
Sempra Mexico 4.875% notes	540	2048
Sempra Mexico 3.75% notes	300	2028
2016:		
Sempra Energy 1.625% notes	500	2019
SDG&E 2.50% first mortgage bonds	500	2026
SoCalGas 2.60% first mortgage bonds	500	2026
Luz del Sur 6.50% corporate bonds	50	2025

In 2018, Sempra Energy used a substantial portion of the net proceeds from long-term debt issuances to finance a portion of the Merger Consideration. The remaining proceeds were used primarily to repay outstanding commercial paper and short-term debt and for general corporate purposes. We discuss issuances of long-term debt further in Note 7 of the Notes to Consolidated Financial Statements.

The California Utilities used the proceeds from their issuances of long-term debt to repay commercial paper and for general working capital purposes.

Payments on Long-Term Debt

Major payments of principal on long-term debt in the last three years included the following:

PAYMENTS ON LONG-TERM DEBT

(Dollars in millions)

	Payments	Maturity
2018:		
Sempra Energy 6.15% notes	\$ 500	2018
SDG&E – OMEC LLC variable-rate loan	295	2019
SDG&E 1.65% first mortgage bonds	161	2018
SDG&E 1.914% amortizing first mortgage bonds	36	2022
SoCalGas 5.45% first mortgage bonds	250	2018
SoCalGas 1.55% first mortgage bonds	250	2018
Luz del Sur 5.18%-6.41% bank loans	52	2018
Sempra Mexico variable-rate notes	69	2018
Sempra Mexico amortizing variable-rate notes	42	2026
Sempra Mexico amortizing fixed and variable-rate bank loans	21	2024-2032
2017:		
Sempra Energy 2.3% notes	600	2017
SDG&E variable-rate first mortgage bonds	140	2017
SDG&E 1.914% amortizing first mortgage bonds	36	2022
Luz del Sur 5.81%-5.97% corporate bonds	43	2017
Sempra Mexico amortizing fixed and variable-rate bank loans	52	2024-2032
2016:		
Sempra Energy 6.5% notes	750	2016
SDG&E 5% industrial development revenue bonds	105	2027
SDG&E 1.914% amortizing first mortgage bonds	35	2022
Luz del Sur 5.05%-6% bank loans	62	2016

In Note 7 of the Notes to Consolidated Financial Statements, we provide information about our lines of credit and additional information about debt activity.

Capital Stock Transactions

Sempra Energy

Cash provided by issuances of common and preferred stock was:

- \$4.5 billion in 2018
- \$47 million in 2017
- \$51 million in 2016

We discuss the 2018 issuances of mandatory convertible preferred stock and common stock in Notes 13 and 14, respectively, of the Notes to Consolidated Financial Statements.

Dividends

Sempra Energy

Sempra Energy paid cash dividends on common stock of:

- \$877 million in 2018
- \$755 million in 2017
- \$686 million in 2016

On December 18, 2018, Sempra Energy declared a quarterly dividend of \$0.895 per share of common stock that was paid on January 15, 2019.

Dividends declared have increased in each of the last three years due to an increase in the per-share quarterly dividends approved by our board of directors from \$0.755 in 2016 (\$3.02 annually) to \$0.8225 in 2017 (\$3.29 annually) to \$0.895 in 2018 (\$3.58 annually).

On February 21, 2019, our board of directors approved an increase in Sempra Energy's quarterly common stock dividend to \$0.9675 per share (\$3.87 annually), the first of which is payable April 15, 2019. Declarations of dividends on our common stock are made at the discretion of the board of directors. While we view dividends as an integral component of shareholder return, the amount of future dividends will depend on earnings, cash flows, financial and legal requirements, and other relevant factors at that time.

In connection with the 2018 issuances of mandatory convertible preferred stock, we declared \$125 million and paid \$89 million of preferred stock dividends in 2018. In addition, on February 21, 2019, our board of directors declared quarterly dividends of \$1.50 per share on our series A preferred stock and \$1.6875 per share on our series B preferred stock, both payable on April 15, 2019. We discuss dividends on our mandatory convertible preferred stock in Note 13 of the Notes to Consolidated Financial Statements.

SDG&E

In 2018, 2017 and 2016, SDG&E paid dividends to Enova and Enova paid corresponding dividends to Sempra Energy of \$250 million, \$450 million and \$175 million, respectively. SDG&E's dividends on common stock declared on an annual historical basis may not be indicative of future declarations, and could be impacted over the next few years in order for SDG&E to maintain its authorized capital structure while managing its capital investment program.

Enova, a wholly owned subsidiary of Sempra Energy, owns all of SDG&E's outstanding common stock. Accordingly, dividends paid by SDG&E to Enova and dividends paid by Enova to Sempra Energy are both eliminated in Sempra Energy's Consolidated Financial Statements.

SoCalGas

SoCalGas declared and paid common stock dividends to PE and PE paid corresponding dividends to Sempra Energy of \$50 million in 2018. As a result of SoCalGas' capital investment program of over \$1 billion per year, SoCalGas did not declare or pay common stock dividends in 2017 or 2016. SoCalGas' common stock dividends in the next few years will be impacted by its ability to maintain its authorized capital structure while managing its capital investment program.

PE, a wholly owned subsidiary of Sempra Energy, owns all of SoCalGas' outstanding common stock. Accordingly, dividends paid by SoCalGas to PE and dividends paid by PE to Sempra Energy are both eliminated in Sempra Energy's Consolidated Financial Statements.

Dividend Restrictions

The board of directors for each of Sempra Energy, SDG&E and SoCalGas has the discretion to determine the payment and amount of future dividends by each such entity. The CPUC's regulation of SDG&E's and SoCalGas' capital structures limits the amounts that are available for loans and dividends to Sempra Energy. At December 31, 2018, based on these regulations, Sempra Energy could have received loans and dividends of approximately \$552 million from SDG&E and \$618 million from SoCalGas.

We provide additional information about dividend restrictions in "Restricted Net Assets" in Note 1 of the Notes to Consolidated Financial Statements.

Book Value Per Common Share

Sempra Energy's book value per common share on the last day of each year was;

- \$54.35 in 2018
- \$50.40 in 2017
- \$51.77 in 2016

The increase in 2018 was primarily the result of increases in equity from issuances of common stock, including share-based compensation, partially offset by dividends exceeding comprehensive income. In 2017, the decrease was attributable to dividends in excess of comprehensive income, partially offset by an increase in equity from share-based compensation.

Capitalization

Our debt to capitalization ratio, calculated as total debt as a percentage of total debt and equity, was as follows:

TOTAL CAPITALIZATION AND DEBT-TO-CAPITALIZATION RATIOS

(Dollars in millions)

	Sempra Energy		
	Consolidated ⁽¹⁾	SDG&E ⁽¹⁾	SoCalGas
	December 31, 2018		
Total capitalization	\$ 44,611	\$ 12,625	\$ 7,944
Debt-to-capitalization ratio	57%	52%	46%
	December 31, 2017		
Total capitalization	\$ 34,552	\$ 11,434	\$ 7,009
Debt-to-capitalization ratio	56%	51%	44%

⁽¹⁾ Includes Otay Mesa VIE with no significant impact.

Significant changes in 2018 that affected capitalization included the following:

- Sempra Energy Consolidated: increase in both long-term and short-term debt, issuances of preferred and common stock, offset by a decrease in NCI primarily from the sale of our solar tax equity investments.
- SDG&E: increase in long-term debt, partially offset by comprehensive income exceeding dividends.
- SoCalGas: increase in both long-term and short-term debt, partially offset by comprehensive income exceeding dividends.

We provide additional information about these significant changes in Notes 1, 5, 7, 13 and 14 of the Notes to Consolidated Financial Statements.

COMMITMENTS

The following tables summarize principal contractual commitments at December 31, 2018 for Sempra Energy Consolidated, SDG&E and SoCalGas. We provide additional information about commitments above and in Notes 7, 9, 15 and 16 of the Notes to Consolidated Financial Statements.

PRINCIPAL CONTRACTUAL COMMITMENTS – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	2019	2020 and 2021	2022 and 2023	Thereafter	Total
Long-term debt	\$ 1,654	\$ 3,744	\$ 2,503	\$ 14,166	\$ 22,067
Interest on long-term debt ⁽¹⁾	846	1,536	1,357	7,833	11,572
Operating leases	91	135	121	303	650
Capital leases ⁽²⁾	21	39	52	1,185	1,297
Purchased-power contracts	654	1,260	1,141	5,185	8,240
Natural gas contracts	263	329	148	280	1,020
LNG contract ⁽³⁾	289	740	758	2,475	4,262
Construction commitments	396	129	46	115	686
Build-to-suit lease	10	22	22	217	271
SONGS decommissioning	90	125	145	266	626
Other asset retirement obligations	96	151	158	1,956	2,361
Sunrise Powerlink wildfire mitigation fund	3	6	6	105	120
Pension and other postretirement benefit obligations ⁽⁴⁾	238	564	561	923	2,286
Environmental commitments ⁽⁵⁾	14	22	2	22	60
Other	75	50	26	107	258
Total	\$ 4,740	\$ 8,852	\$ 7,046	\$ 35,138	\$ 55,776

⁽¹⁾ We calculate expected interest payments using the stated interest rate for fixed-rate obligations, including floating-to-fixed interest rate swaps and cross-currency swaps. We calculate expected interest payments for variable-rate obligations based on forward rates in effect at December 31, 2018.

⁽²⁾ Present value of net minimum lease payments includes \$16 million at SDG&E that will be recorded as finance leases when construction of the battery storage facilities is completed and delivery of contracted power commences.

⁽³⁾ Sempra LNG & Midstream has a sale and purchase agreement for the supply of LNG to the ECA terminal. The commitment amount is calculated using a predetermined formula based on estimated forward prices of the index applicable from 2019 to 2029.

⁽⁴⁾ Amounts represent expected company contributions to the plans for the next 10 years.

⁽⁵⁾ Excludes amounts related to the natural gas leak at SoCalGas' Aliso Canyon natural gas storage facility.

PRINCIPAL CONTRACTUAL COMMITMENTS – SDG&E

(Dollars in millions)

	2019	2020 and 2021	2022 and 2023	Thereafter	Total
Long-term debt	\$ 64	\$ 496	\$ 562	\$ 3,874	\$ 4,996
Interest on long-term debt ⁽¹⁾	213	416	382	2,579	3,590
Operating leases	25	48	42	55	170
Capital leases ⁽²⁾	17	38	52	1,181	1,288
Purchased-power contracts	527	1,020	947	5,026	7,520
Construction commitments	43	84	13	4	144
SONGS decommissioning	90	125	145	266	626
Other asset retirement obligations	6	10	11	221	248
Sunrise Powerlink wildfire mitigation fund	3	6	6	105	120
Pension and other postretirement benefit obligations ⁽³⁾	40	94	120	209	463
Environmental commitments	5	2	2	19	28
Other	4	8	6	33	51
Total	\$ 1,037	\$ 2,347	\$ 2,288	\$ 13,572	\$ 19,244

⁽¹⁾ SDG&E calculates expected interest payments using the stated interest rate for fixed-rate obligations, including floating-to-fixed interest rate swaps.

⁽²⁾ Present value of net minimum lease payments includes \$16 million that will be recorded as finance leases when construction of the battery storage facilities is completed and delivery of contracted power commences.

⁽³⁾ Amounts represent expected SDG&E contributions to the plans for the next 10 years.

PRINCIPAL CONTRACTUAL COMMITMENTS – SOCIALGAS*(Dollars in millions)*

	2019	2020 and 2021	2022 and 2023	Thereafter	Total
Long-term debt	\$ —	\$ —	\$ —	\$ 3,459	\$ 3,459
Interest on long-term debt ⁽¹⁾	135	269	269	1,956	2,629
Natural gas contracts	126	226	61	49	462
Operating leases	36	64	58	65	223
Capital leases	3	—	—	—	3
Environmental commitments ⁽²⁾	9	20	—	2	31
Pension and other postretirement benefit obligations ⁽³⁾	119	368	367	596	1,450
Asset retirement obligations	90	141	147	1,685	2,063
Other	1	3	3	35	42
Total	\$ 519	\$ 1,091	\$ 905	\$ 7,847	\$ 10,362

⁽¹⁾ SoCalGas calculates interest payments using the stated interest rate for fixed-rate obligations.

⁽²⁾ Excludes amounts related to the natural gas leak at the Aliso Canyon natural gas storage facility.

⁽³⁾ Amounts represent expected SoCalGas contributions to the plans for the next 10 years.

The tables exclude:

- contracts between consolidated affiliates
- intercompany debt
- employment contracts

The tables also exclude income tax liabilities at December 31, 2018 of:

- \$87 million for Sempra Energy Consolidated
- \$11 million for SDG&E
- \$61 million for SoCalGas

These liabilities relate to uncertain tax positions and were excluded from the tables because we are unable to reasonably estimate the timing of future payments due to uncertainties in the timing of the effective settlement of tax positions. We provide additional information about unrecognized income tax benefits in Note 8 of the Notes to Consolidated Financial Statements.

OFF-BALANCE SHEET ARRANGEMENTS

The maximum aggregate amount of guarantees provided by Sempra Energy on behalf of related parties at December 31, 2018 is \$4.2 billion. We discuss these guarantees in Note 6 of the Notes to Consolidated Financial Statements.

We have bilateral unsecured standby letter of credit capacity with select lenders that is uncommitted and supported by reimbursement agreements. At December 31, 2018, we had approximately \$598 million in standby letters of credit outstanding under these agreements.

SDG&E has entered into PPAs which are variable interests. Our investments in Oncor Holdings and Cameron LNG JV are variable interests. Sempra Renewables has entered into tax equity arrangements which are variable interests. Sempra Energy's other businesses may also enter into arrangements which could include variable interests. We discuss variable interests in Note 1 of the Notes to Consolidated Financial Statements.

FACTORS INFLUENCING FUTURE PERFORMANCE

SEMPRA ENERGY

Capital Rotation

We regularly review our portfolio of assets with a view toward allocating capital to those businesses that we believe can further improve shareholder value. In June 2018, we announced, following a comprehensive strategic review of our businesses and asset portfolio by our board of directors and management over the past year, our intention to sell several energy infrastructure assets, including our entire portfolio of U.S. wind and U.S. solar assets, as well as certain non-utility natural gas storage assets in the southeast U.S. In December 2018, Sempra Renewables completed the sale of all its operating solar assets, one wind generation facility, and its solar and battery storage development projects to a subsidiary of Con Ed for \$1.6 billion. In February 2019, Sempra Renewables entered into an agreement to sell its remaining U.S. wind assets to American Electric Power for \$551 million, subject to customary closing adjustments. We expect to complete the sale in the second quarter of 2019. Also in February 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners for \$328 million (subject to working capital adjustments and Sempra LNG & Midstream's purchase for \$20 million of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale). We continue to actively pursue the sale of our remaining U.S. wind assets. We discuss these sales further in Notes 5 and 6 of the Notes to Consolidated Financial Statements and below in "Sempra Renewables" and "Sempra LNG & Midstream." On January 25, 2019, our board of directors approved a plan to sell our South American businesses. We expect to complete the sales process by the end of 2019.

Shareholder Activism

From time to time, activist shareholders may take certain actions to advance shareholder proposals, or otherwise attempt to effect changes and assert influence on our board of directors or management. On June 11, 2018, Elliott Associates, L.P. and Elliott International, L.P. (collectively, Elliott) and Bluescape Resources Company LLC (Bluescape) disclosed they were collectively holders of an approximately 4.9-percent economic interest in our outstanding common stock as of such date and delivered a letter and accompanying presentation to our board of directors seeking collaboration with them and management to nominate six new directors identified by Elliott and Bluescape and establish a committee of the board of directors to conduct portfolio and operational reviews of our business. In September 2018, we announced that we reached an agreement with Elliott, Bluescape and Cove Key Management, LP that, among other things, added two new board members that were mutually agreed between the parties, and repurposed the board's LNG Construction and Technology Committee into the LNG and Business Development Committee, which will conduct a comprehensive business review of Sempra Energy. The new committee is comprised of the three previously existing committee members and the two new board members. We are committed to continued constructive communications with all our shareholders and are available to discuss and evaluate ideas from our shareholders on how to maximize long-term value.

SDG&E

SDG&E's operations have historically provided relatively stable earnings and liquidity. Its performance will depend primarily on the ratemaking and regulatory process, environmental regulations, economic conditions, actions by the California legislature and the changing energy marketplace.

Capital Project Updates

We summarize below information regarding certain major capital projects at SDG&E that are pending regulatory resolution.

CAPITAL PROJECTS PENDING REGULATORY RESOLUTION – SDG&E

Project description	Estimated capital cost (in millions)	Status
Electric Vehicle Charging		
<ul style="list-style-type: none"> January 2017 application, pursuant to SB 350, to perform various activities and make investments in support of six priority projects and residential EV charging. In January 2018, received approval for the six priority projects at \$20 million. In May 2018, received conditional approval of a scaled down residential EV charging program utilizing capital of \$30 million and O&M of \$151 million. 	\$20	<ul style="list-style-type: none"> SDG&E will not implement the modified residential EV charging program given the inability to establish an acceptable shareholder incentive mechanism and other necessary terms.
<ul style="list-style-type: none"> January 2018 application, pursuant to SB 350, to make investments to support medium-duty and heavy-duty EVs with an estimated implementation cost of \$34 million of O&M. 	\$121	<ul style="list-style-type: none"> Application seeking approval of settlement filed in November 2018. A draft decision is expected in the first half of 2019.
Energy Storage Projects		
<ul style="list-style-type: none"> February 2018 application, pursuant to AB 2868, to make investments to accelerate the widespread deployment of distributed energy storage systems. SDG&E's application requests approval of 100 MW of utility-owned energy storage. 	\$161	<ul style="list-style-type: none"> A draft decision is expected in the first half of 2019.

The following capital projects that we discussed in our 2017 annual report on Form 10-K and/or our 2018 quarterly reports on Form 10-Q have been approved by the CPUC:

- Energy Storage Project (70 MW program); and
- Utility Billing and Customer Information Systems Software.

Electric Rate Reform – California Assembly Bill 327

AB 327 became law on January 1, 2014 and restores the authority to establish electric residential rates for electric utility companies in California to the CPUC and removes the rate caps established in AB 1X adopted in early 2001 during California's energy crisis and in SB 695 adopted in 2009. Additionally, the bill provides the CPUC the authority to adopt a monthly fixed charge for all residential customers. In July 2015, the CPUC adopted a decision that established comprehensive reform and a framework for rates that we believe are more transparent, fair and sustainable. The decision directed changes beginning in 2015 and provides a path for continued reforms through 2020. The changes also included fewer rate tiers and a gradual reduction in the difference between the tiered rates, similar to the tier differential that existed prior to the 2000-2001 energy crisis, and a transition to TOU rates. The decision allows the utilities to seek a fixed charge for residential customers, but sets certain conditions for its implementation, which would be no sooner than 2020 depending on CPUC approval. In December 2018, the CPUC approved SDG&E's request to implement residential default TOU rates beginning in 2019. Overall, these reforms should result in a rate structure that better aligns rates with the actual cost to serve customers.

In July 2014, the CPUC initiated a rulemaking proceeding to develop a successor tariff to the state's existing NEM program pursuant to the provisions of AB 327. The NEM program was originally established in 1995 and is an electric billing tariff mechanism designed to promote the installation of on-site renewable generation. Under NEM, qualifying customer-generators receive a full retail-rate for the energy they generate that is fed back to the utility's power grid. This occurs during times when the customer's generation exceeds its own energy usage. In addition, if a NEM customer generates any electricity over the annual measurement period that exceeds its annual consumption, the customer receives compensation at a rate equal to a wholesale energy price.

SDG&E implemented a successor NEM tariff in July 2016, after reaching the 617-MW cap established for the original NEM program. The successor NEM tariff requires NEM customers to pay some costs that would otherwise be borne by non-NEM customers and moves new NEM customers to TOU rates. These changes to the NEM program begin a process of reducing the cost burden on non-NEM customers, but SDG&E believes that further reforms are necessary. In a January 2016 decision, the CPUC committed to revisit the NEM successor tariff and the adequacy of its NEM reforms, and we expect that review will begin in the second half of 2019. As of December 31, 2018, the total NEM capacity in SDG&E's service territory totaled 1,023 MW.

Further NEM reform is necessary to help ensure that SDG&E is authorized to recover, from NEM customers, the costs incurred in providing grid and energy services, as well as mandated legislative and regulatory public policy programs. SDG&E believes this approach would be preferable to recovering these costs from customers not participating in NEM. If NEM self-generating installations continue to increase at their present pace, the rate structure adopted by the CPUC could have a material adverse effect on SDG&E's business, cash flows, financial condition, results of operations and/or prospects. For additional discussion, see "Item 1A. Risk Factors."

Potential Impacts of Community Choice Aggregation and Direct Access

SDG&E provides electric services, including the commodity of electricity, to the majority of its customers ("bundled customers"). SDG&E enters into long-term contracts to procure electricity on behalf of these bundled customers. SDG&E's earnings are "decoupled" from electric sales volumes. One aspect of decoupling is that commodity costs for electricity are directly passed through to bundled customers (see discussion in "Revenues from Sources Other Than Contracts with Customers – Utilities Regulatory Revenues" in Note 3 of the Notes to Consolidated Financial Statements). SDG&E's bundled customers have the option to purchase the commodity of electricity from alternate suppliers under defined programs, including CCA and DA. In such cases, California law (SB 350) prohibits remaining bundled customers from experiencing any cost increase as a result of departing customers' choice to receive electric commodity from an alternate supplier. Under the existing cost allocation mechanism approved by the CPUC, customers opting to have a CCA procure their electricity must absorb a portion of above-market cost of electricity procurement commitments already made by SDG&E on their behalf. In October 2018, the CPUC issued a final decision that revises the current PCIA framework by adopting several refinements to better ensure ratepayer indifference, as required by law, and directs SDG&E to implement updated PCIA rates effective January 1, 2019 using the adopted methodology. The final decision revises the benchmarks used to calculate the PCIA and directs the future implementation of an annual true-up mechanism to ensure that ratepayer indifference is maintained. The decision also removes existing restrictions on recovering certain costs through the PCIA, including the ability to recover the above-market costs of resources that have been in the utility's portfolio for more than 10 years and certain legacy utility-owned generation resources. We believe these PCIA changes should help ensure that cost allocations result in ratepayer indifference and comply with the law. However, further refinements to the PCIA may be required to help ensure that the remaining bundled customers do not experience any cost increase as a result of customers departing to CCA or DA service.

Renewable Energy Procurement

SDG&E is subject to the RPS Program administered by both the CPUC and the CEC. In September 2018, SB 100 was signed into law and requires each California utility to procure 50 percent of its annual electric energy requirements from renewable energy sources by 2026, and 60 percent by 2030. SB 100 also creates the policy of meeting all the State of California's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by 2045, for a total of 100 percent clean energy. The law also includes stipulations that this policy not increase carbon emissions elsewhere in the western grid and not allow resource shuffling, and requires that the CPUC, CEC, CARB and other state agencies incorporate this policy into all relevant planning.

The RPS Program currently contains flexible compliance mechanisms that can be used to comply with or meet the RPS Program mandates. SDG&E believes it will be able to comply with the RPS Program requirements, as revised, based on its contracting activity and, if necessary, application of the flexible compliance mechanisms. SDG&E's failure to comply with the RPS Program requirements could subject it to CPUC-imposed penalties, which could materially adversely affect its business, cash flows, financial condition, results of operations and/or prospects.

SOCALGAS

SoCalGas' operations have historically provided relatively stable earnings and liquidity. Its performance will depend primarily on the ratemaking and regulatory process, environmental regulations, economic conditions, actions by the California legislature and the changing energy marketplace. SoCalGas' performance will also depend on the resolution of the legal, regulatory and other matters concerning the Leak at the Aliso Canyon natural gas storage facility, which we discuss below, in Note 16 of the Notes to Consolidated Financial Statements and in "Item 1A. Risk Factors."

The following capital project that we discussed in our 2018 quarterly reports on Form 10-Q has been approved by the CPUC:

- San Joaquin Valley OIR

Aliso Canyon Natural Gas Storage Facility Gas Leak

In October 2015, SoCalGas discovered a leak at one of its injection-and-withdrawal wells, SS25, at its Aliso Canyon natural gas storage facility located in Los Angeles County. SoCalGas worked closely with several of the world's leading experts to stop the Leak. In February 2016, DOGGR confirmed that the well was permanently sealed.

See Note 16 of the Notes to Consolidated Financial Statements for discussions of the following matters related to the Leak:

- Local Community Mitigation Efforts;
- Civil and Criminal Litigation;
- Regulatory Proceedings; and
- Governmental Investigations and Orders and Additional Regulation.

Cost Estimates, Accounting Impacts and Insurance

At December 31, 2018, SoCalGas estimates its costs related to the Leak are \$1,055 million (the cost estimate), which includes \$1,027 million of costs recovered or probable of recovery from insurance. Approximately 54 percent of the cost estimate is for the temporary relocation program (including cleaning costs and certain labor costs). The remaining portion of the cost estimate includes costs incurred to defend litigation, for the root cause analysis being conducted by an independent third party, for efforts to control the well, to mitigate the actual natural gas released, the cost of replacing the lost gas, and other costs, as well as the estimated costs to settle certain actions.

As of December 31, 2018, we recorded the expected recovery of the cost estimate related to the Leak of \$461 million as Insurance Receivable for Aliso Canyon Costs on SoCalGas' and Sempra Energy's Consolidated Balance Sheets. This amount is net of insurance retentions and \$566 million of insurance proceeds we received through December 31, 2018 related to portions of the cost estimate described above, including temporary relocation and associated processing costs, control-of-well expenses, legal costs and lost gas. If we were to conclude that this receivable or a portion of it is no longer probable of recovery from insurers, some or all of this receivable would be charged against earnings, which could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

As described in "Civil and Criminal Litigation" in Note 16 of the Notes to Consolidated Financial Statements, the actions seek compensatory, statutory and punitive damages, restitution, and civil, administrative and criminal fines, penalties and other costs, which, except for the amounts paid or estimated to settle certain actions, are not included in the cost estimate as it is not possible at this time to predict the outcome of these actions or reasonably estimate the amount of damages, restitution or civil, administrative or criminal fines, penalties or other costs that may be imposed. The recorded amounts above also do not include the costs to clean additional homes pursuant to the directives by the DPH, future legal costs necessary to defend litigation, and other potential costs that we currently do not anticipate incurring or that we cannot reasonably estimate. Furthermore, the cost estimate does not include certain other costs incurred by Sempra Energy associated with defending against shareholder derivative lawsuits.

Excluding directors' and officers' liability insurance, we have at least four kinds of insurance policies that together we estimate provide between \$1.2 billion to \$1.4 billion in insurance coverage, depending on the nature of the claims. We cannot predict all of the potential categories of costs or the total amount of costs that we may incur as a result of the Leak. Subject to various policy limits, exclusions and conditions, based on what we know as of the filing date of this report, we believe that our insurance policies collectively should cover the following categories of costs: costs incurred for temporary relocation and associated processing costs (including cleaning costs and certain labor costs), costs to address the Leak and stop or reduce emissions, the root cause analysis being conducted to investigate the cause of the Leak, the value of lost gas, costs incurred to mitigate the actual natural gas released, costs associated with litigation and claims by nearby residents and businesses, any costs to clean additional homes pursuant to directives by the DPH, and, in some circumstances depending on their nature and manner of assessment, fines and penalties. There can be no assurance that we will be successful in obtaining additional insurance recovery for these costs, and to the extent we are not successful in obtaining coverage or these costs exceed the amount of our coverage, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

As noted above, at December 31, 2018, SoCalGas' estimate of costs related to the Leak of \$1,055 million include \$1,027 million of costs recovered or probable of recovery from insurance. This estimate may rise significantly as more information becomes available. Costs not included in the \$1,055 million cost estimate could be material. If any costs are not covered by insurance (including any costs in excess of applicable policy limits), if there are significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are not tax deductible, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Natural Gas Storage Operations and Reliability

Natural gas withdrawn from storage is important for service reliability during peak demand periods, including peak electric generation needs in the summer and heating needs in the winter. The Aliso Canyon natural gas storage facility, with a storage capacity of 86 Bcf (which represents 63 percent of SoCalGas' natural gas storage inventory capacity), is the largest SoCalGas storage facility and an important element of SoCalGas' delivery system. SoCalGas suspended injection of natural gas into the Aliso Canyon natural gas storage facility beginning in October 2015 and, in July 2017, resumed limited injections. The CPUC has issued a series of directives to SoCalGas establishing the range of working gas to be maintained in the Aliso Canyon natural gas storage facility to help ensure safety and reliability for the region and just and reasonable rates in California, the most recent of which, issued July 2, 2018, directed SoCalGas to maintain up to 34 Bcf of working gas. Limited withdrawals of natural gas from the Aliso Canyon natural gas storage facility were made in 2018 to augment natural gas supplies during critical demand periods.

If the Aliso Canyon natural gas storage facility were to be permanently closed, or if future cash flows were otherwise insufficient to recover its carrying value, it could result in an impairment of the facility and significantly higher than expected operating costs and/or additional capital expenditures, and natural gas reliability and electric generation in the region could be jeopardized. At December 31, 2018, the Aliso Canyon natural gas storage facility had a net book value of \$724 million. Any significant impairment of this asset could have a material adverse effect on SoCalGas' and Sempra Energy's results of operations for the period in which it is recorded. Higher operating costs and additional capital expenditures incurred by SoCalGas may not be recoverable in customer rates, and could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

CALIFORNIA UTILITIES – JOINT MATTERS

Capital Project Updates

We summarize below information regarding certain major joint capital projects of the California Utilities that are pending regulatory resolution.

JOINT CAPITAL PROJECTS PENDING REGULATORY RESOLUTION – CALIFORNIA UTILITIES

Project description	Estimated capital cost (in millions)	Status
Line 1600 Test or Replacement Project		
<ul style="list-style-type: none"> ▪ In September 2018, SDG&E and SoCalGas submitted a plan to the CPUC to address Line 1600 PSEP requirements by replacing 37 miles of Line 1600 predominately in populated areas and testing 13 miles of Line 1600 in rural areas. ▪ Estimated O&M implementation cost of \$45 million and cost to retire portions of Line 1600 of \$14 million at SDG&E. 	\$671	<ul style="list-style-type: none"> ▪ In January 2019, the CPUC approved the proposed plan to address Line 1600 PSEP requirements. Cost recovery will be addressed in future GRCs.
Mobile Home Park Utility Upgrade Program		
<ul style="list-style-type: none"> ▪ May 2017 application filed with the CPUC to convert an additional 20 percent of eligible units to direct utility service, for a total of 30 percent of mobile homes. ▪ In April 2018, the CPUC opened an OIR to evaluate the Mobile Home Park Program to convert eligible units to direct utility service and determine if it should be extended beyond the initial three-year pilot to a permanent program, and if extended, to adopt programmatic modifications. ▪ In February 2019, the CPUC issued a draft resolution to approve the extension of the pilot program through the earlier of 2020 or the issuance of a CPUC decision on pending proceedings. 	\$471 to \$508	<ul style="list-style-type: none"> ▪ In November 2018, the CPUC dismissed the May 2017 application, without prejudice, because the issues are subsumed in a separate OIR. ▪ A final decision in the OIR is expected by the end of 2019. ▪ A final resolution is expected in the first half of 2019.

The Leak Abatement Compliance Program that we discussed in our 2018 quarterly reports on Form 10-Q has been approved by the CPUC. The need for the Pipeline Safety & Reliability Project discussed in our 2017 annual report on Form 10-K and in our 2018 quarterly reports on Form 10-Q is met by the Line 1600 Test or Replacement Project described above.

Natural Gas Pipeline Operations Safety Assessments

In 2011, the California Utilities filed plans with the CPUC to implement the CPUC's directives to test or replace natural gas transmission pipelines that do not have sufficient documentation of a pressure test and to address retrofitting pipelines to allow for in-line inspection tools and, where appropriate, automated or remote controlled shut-off valves (referred to as PSEP). In 2014, the CPUC issued a final decision approving the utilities' analytical approach to implementing PSEP, as embodied in an approved decision tree, but did not pre-approve recovery of the costs of implementing PSEP, because initial cost estimates were too preliminary to form the basis for ratemaking. Instead, the CPUC established a process to review the reasonableness of incurred PSEP costs after-the-fact to determine the amounts that may be recovered from ratepayers. As portions of PSEP have been completed, actual costs have generally been higher than the preliminary estimates, partially offset by changes in scope that have reduced costs. Implementation costs incurred through 2018 are summarized in the table below. Over time, as we have completed an increasing number of projects, SoCalGas and SDG&E achieve greater cost estimate accuracy, as well as efficiencies in executing the project work. Cost estimates for work performed in 2017, 2018 and forward reflect the development of more detailed estimates, actual cost experience as portions of the work are completed and additional refinement in scope. In addition, implementation of new regulatory requirements or clarification of existing regulatory requirements in the future could materially impact the cost forecasts.

In 2016, the CPUC issued a final decision authorizing SoCalGas and SDG&E to recover in rates 50 percent of the balances recorded in PSEP regulatory accounts as of January 1 each year, subject to refund, pending reasonableness review. The decision also incorporated a forward-looking schedule to file reasonableness review applications in 2016 and 2018, file a forecast application for pre-approval of project costs incurred in 2017 and 2018, and to include PSEP costs not the subject of prior applications in future GRCs. We expect this transition from an after-the-fact reasonableness review framework to pre-approval of PSEP implementation costs based on cost forecasts to improve the certainty of recovery for PSEP implementation costs.

In September 2016, SoCalGas and SDG&E filed a joint application with the CPUC for review of PSEP project costs completed through June 2015. The total costs submitted for review are approximately \$195 million (\$180 million for SoCalGas and \$15 million for SDG&E), including certain costs for which we were not seeking recovery. The CPUC approved a final decision in February 2019 for cost recovery of approximately \$187 million (\$172 million for SoCalGas and \$15 million for SDG&E) through the PSEP program.

In March 2017, SoCalGas and SDG&E filed an application with the CPUC requesting pre-approval of the forecasted revenue requirement associated with twelve PSEP projects, effective in rates on January 1, 2019. The California Utilities expect to incur total costs for the twelve projects of approximately \$255 million (\$198 million in capital expenditures and \$57 million in O&M). We expect a CPUC decision in 2019.

In November 2018, SoCalGas and SDG&E filed a joint application with the CPUC for review of completed PSEP projects totaling \$941 million (\$811 million at SoCalGas and \$130 million at SDG&E), including certain costs for which we are not seeking recovery. We expect a CPUC decision in 2020.

As shown in the table below, SoCalGas and SDG&E have made significant pipeline safety investments under the PSEP program, and SoCalGas expects to continue making significant investments as approved through various regulatory proceedings. SDG&E's PSEP program was substantially completed in 2017, with the exception of Line 1600, which we discuss in the table above. Both utilities have filed joint applications or plan to file future applications with the CPUC for review of the PSEP project costs as follows:

PIPELINE SAFETY ENHANCEMENT PLAN – REASONABLENESS REVIEW SUMMARY
(Dollars in millions)

	2011 through 2018			
	Total invested ⁽¹⁾	CPUC review completed ⁽²⁾	CPUC review pending ⁽³⁾	2019 and future applications ⁽⁴⁾⁽⁵⁾
Sempra Energy Consolidated:				
Capital	\$ 1,680	\$ 8	\$ 1,031	\$ 641
Operation and maintenance	196	25	150	21
Total	\$ 1,876	\$ 33	\$ 1,181	\$ 662
SoCalGas:				
Capital	\$ 1,317	\$ 8	\$ 895	\$ 414
Operation and maintenance	187	25	141	21
Total	\$ 1,504	\$ 33	\$ 1,036	\$ 435
SDG&E:				
Capital	\$ 363	\$ —	\$ 136	\$ 227
Operation and maintenance	9	—	9	—
Total	\$ 372	\$ —	\$ 145	\$ 227

⁽¹⁾ Excludes disallowed costs through December 31, 2018 of \$7 million at SoCalGas and \$5 million at SDG&E for pressure testing or replacing pipelines installed between January 1, 1956 and July 1, 1961. Also excludes \$40 million incurred for Line 1600 Test or Replacement Project.

⁽²⁾ Approved in December 2016; excludes \$2 million of PSEP-specific insurance costs for which SoCalGas and SDG&E are authorized to request recovery in a future filing.

⁽³⁾ Includes (a) \$195 million for completed projects pursuant to the 2016 Reasonableness Review Application filed in September 2016, with a final decision approved in February 2019 for cost recovery; (proposed decision received in December 2018); (b) approximately \$45 million of pre-engineering costs to support projects under development, submitted in the Forecast Application filed in March 2017, with a decision expected in 2019; and (c) \$941 million for completed projects pursuant to the 2018 Reasonableness Review Application filed in November 2018, with a decision expected in 2020.

⁽⁴⁾ Remaining costs not the subject of prior applications are to be included in subsequent GRCs.

⁽⁵⁾ Authorized to recover 50 percent of the Phase 1 revenue requirement annually, subject to refund.

If either SoCalGas or SDG&E were unable to recover a significant amount of these safety investments from ratepayers, it could have a material adverse effect on the cash flows, results of operations and financial condition of SoCalGas, SDG&E and Sempra Energy.

CPUC General Rate Case

We describe the CPUC GRC proceeding in “Item 1. Business – Ratemaking Mechanisms – California Utilities – General Rate Case Proceedings.” On October 6, 2017, SDG&E and SoCalGas filed their 2019 GRC applications requesting CPUC approval of test year revenue requirements for 2019 and attrition year adjustments for 2020 through 2022. We discuss the 2019 GRC in Note 4 of the Notes to Consolidated Financial Statements. The results of the rate case may materially and adversely differ from what is contained in the GRC applications.

Incentive Mechanisms

We describe CPUC incentive mechanisms in “Item 1. Business – Ratemaking Mechanisms – California Utilities – Incentive Mechanisms.” Incentive awards are included in revenues when we receive final CPUC approval of the award, the timing of which may not be consistent from year to year. We would record penalties for results below the specified benchmarks against revenues when we believe it is probable that the CPUC would assess a penalty.

Energy Efficiency

The CPUC has established incentive mechanisms that are based on the effectiveness of energy efficiency programs.

ENERGY EFFICIENCY AWARDS RECORDED IN REVENUES
(Dollars in millions)

Award period (program years)	SDG&E			SoCalGas		
	2018	2017 ⁽¹⁾	2016	2018	2017 ⁽¹⁾	2016
July 2016 - June 2017	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
July 2015 - June 2016	—	3	—	—	1	—
July 2014 - June 2015	—	—	4	—	—	4

⁽¹⁾ Revenues in 2017 reflect settlement reductions as approved by the CPUC, as discussed below.

In March 2017, the CPUC approved the settlement agreements reached with the Cal PA and TURN regarding the incentive awards for program years 2006 through 2008, wherein the parties agreed that SDG&E and SoCalGas would offset up to a total of approximately \$4 million each against future incentive awards over a three-year period beginning in 2017. If the total incentive awards ultimately authorized for 2017 through 2019 are less than approximately \$4 million for either utility, the applicable utility is released from paying any remaining unapplied amount.

Natural Gas Procurement

The California Utilities procure natural gas on behalf of their core natural gas customers. The CPUC has established incentive mechanisms to allow the California Utilities the opportunity to share in the savings and/or costs from buying natural gas for their core customers at prices below or above monthly market-based benchmarks. SoCalGas procures natural gas for SDG&E's core natural gas customers' requirements. SoCalGas' GCIM is applied on the combined portfolio basis.

GCIM AWARDS RECORDED IN REVENUES

(Dollars in millions)

Award period (program years)	SoCalGas		
	2018	2017	2016
April 2016 - March 2017	\$ 4	\$ —	\$ —
April 2015 - March 2016	—	5	—
April 2014 - March 2015	—	—	—

In February 2019, the CPUC issued a draft decision approving SoCalGas' GCIM award of \$11 million for natural gas procured for its core customers during the 12-month period ended March 31, 2018.

Operational Incentives

The CPUC may establish operational incentives and associated performance benchmarks as part of a GRC or cost of service proceeding. In the 2016 GRC FD, the CPUC did not establish any operational incentives for SoCalGas, but established an electric reliability incentive for SDG&E. Outcomes could vary from a maximum annual penalty of \$8 million to a maximum annual award of \$8 million.

Senate Bill 901

On September 21, 2018, the Governor of California signed into law SB 901, which includes a number of measures primarily intended to address certain wildfire risks relevant to consumers and utilities and guidelines for the CPUC to determine whether utilities acted reasonably in order to recover costs related to wildfires. Among other things, SB 901 also contains provisions for utility issuance of recovery bonds with respect to certain wildfire costs, subject to CPUC approval, wildfire mitigation plans, and creation of a commission to explore establishment of a fund and options for cost socialization with respect to catastrophic wildfires associated with utility infrastructure. The provisions of SB 901 are applicable to 2017 wildfire costs incurred by utilities, if any, and wildfire events occurring on or after January 1, 2019. They do not apply to the wildfires in SDG&E's service territory in 2007.

The CPUC initiated an OIR in October 2018 to implement the provisions of SB 901 related to electric utility wildfire mitigation plans. The OIR will provide guidance on the form and content of the initial wildfire mitigation plans, provide a venue for review of the initial plans, and develop and refine the content of and process for review and implementation of wildfire mitigation plans to be filed in future years. The electric utilities filed their proposed wildfire mitigation plans in February 2019, and we expect the CPUC will make a decision on the final plans in mid-2019. The scope of the OIR is limited to only the wildfire mitigation plans required by SB 901 and does not include cost recovery. Pursuant to SB 901, the CPUC shall authorize each utility to establish a memorandum account to track the costs incurred to implement the plan. The costs recorded to the memorandum account shall be incremental to the utility's authorized recovery and reviewed as part of the utility's next GRC proceeding.

SB 901 did not change the doctrine of inverse condemnation, which imposes strict liability on a utility whose equipment is determined to be a cause of a fire (meaning that the utility may be found liable regardless of fault). In their 2018 ratings actions for SDG&E, which we discuss in "Item 7A. Quantitative and Qualitative Disclosures About Market Risk – Credit Ratings," each of Moody's, Fitch Ratings and S&P indicated that the SDG&E rating downgrades reflected the failure of SB 901 to address the longer-term risks associated with inverse condemnation. Without further changes to the law or other reform, we believe that SDG&E is exposed to the potential of material liabilities if a major wildfire were to occur in its service territory and it was determined that its equipment was a cause of the fire.

Separately, SB 901, together with draft guidance from the CPUC, also provides that electric and gas corporations, such as SDG&E and SoCalGas, shall no longer recover compensation (including salary, bonus, benefits or other consideration paid) of certain senior officers from ratepayers; rather, such compensation shall be a shareholder expense. In December 2018, the CPUC published a resolution ordering memorandum accounts to be established to track such compensation costs.

SEMPRA TEXAS UTILITY

Acquisition of Oncor Holdings

On March 9, 2018, we completed the acquisition of an indirect, 100-percent interest in Oncor Holdings, which owns an 80.25-percent interest in Oncor, and other EFH assets and liabilities unrelated to Oncor. As we discuss in “Item 1. Business,” due to ring-fencing measures, existing governance mechanisms and commitments in effect following the Merger, we are prevented from having the power to direct the significant activities of Oncor Holdings and Oncor. As a result, we account for our 100-percent ownership interest in Oncor Holdings as an equity method investment, which is included in our newly formed reportable segment, Sempra Texas Utility. Certain other assets and liabilities unrelated to Oncor acquired in connection with the Merger were subsumed within our parent organization. We discuss this Merger and the related financing in Notes 5, 7, 13 and 14 of the Notes to Consolidated Financial Statements and above in “Capital Resources and Liquidity.”

The success of the Merger will depend, in part, on the ability of Oncor to successfully execute its business strategy, including several objectives that are capital intensive, and to respond to challenges in the electric utility industry. If Oncor is not able to achieve these objectives, is not able to achieve these objectives on a timely basis, or otherwise fails to perform in accordance with our expectations, the anticipated benefits of the Merger may not be realized fully or at all and the Merger may materially adversely affect the results of operations, financial condition and prospects of Sempra Energy.

Pending Acquisitions

On October 18, 2018, Oncor entered into the InfraREIT Merger Agreement, whereby Oncor has agreed to acquire a 100 percent interest in InfraREIT and InfraREIT Partners for approximately \$1,275 million, plus approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition. In addition, the transaction includes InfraREIT’s outstanding debt, which as of September 30, 2018 was approximately \$945 million. Also on October 18, 2018, Oncor entered into the Asset Exchange Agreement, whereby SDTS has agreed to accept and assume certain electricity transmission and distribution-related assets and liabilities of SU in exchange for certain SDTS assets. Immediately prior to completing the exchange, SDTS would become a wholly owned, indirect subsidiary of InfraREIT Partners.

On October 18, 2018, Sempra Energy entered into the Securities Purchase Agreement, whereby Sempra Texas Utilities Holdings I, LLC has agreed to acquire 50 percent of the economic interest in Sharyland Holdings, LP for approximately \$98 million, subject to customary closing adjustments. In connection with and prior to the consummation of the Securities Purchase Agreement, Sharyland Holdings, LP would own 100 percent of the membership interests in SU and SU would convert into a limited liability company, expected to be named Sharyland Utilities, LLC. Upon consummation of the Securities Purchase Agreement, Sempra Texas Utilities Holdings I, LLC would indirectly own and account for its 50 percent interest in Sharyland Utilities, LLC as an equity method investment.

Consummation of these transactions is subject to the satisfaction of various closing conditions, including the substantially concurrent consummation of these transactions. These transactions also require approval by the PUCT and the FERC, as well as the satisfaction of other regulatory requirements, approval of the Committee on Foreign Investment in the United States and other customary closing conditions. The acquisition of InfraREIT was approved by InfraREIT stockholders on February 7, 2019. We expect that the transactions will close in mid-2019. There can be no assurance that Oncor and Sempra Energy will derive the anticipated benefits from these acquisitions.

We discuss these transactions further in Note 5 of the Notes to Consolidated Financial Statements.

Oncor intends to fund its acquisition of interests in InfraREIT from capital contributions from Sempra Energy and certain indirect equity holders of TTI, proportionate to Sempra Energy’s and TTI’s respective ownership interests in Oncor. We plan to fund our approximately \$1,025 million share of the contribution to Oncor (excluding Sempra Energy’s share of approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition) and purchase the 50-percent interest in Sharyland Holdings, LP by utilizing a portion of the \$1.6 billion of proceeds received from the December 2018 sale of certain Sempra Renewables assets to a subsidiary of Con Ed that we discuss in Note 5 of the Notes to Consolidated Financial Statements.

SEMPRA SOUTH AMERICAN UTILITIES

On January 25, 2019, our board of directors approved a plan to sell our South American businesses based on our strategic shift to be geographically focused on North America. We expect to complete the sales process by the end of 2019.

Our utilities in South America have historically provided relatively stable earnings and liquidity, and their future performance will depend primarily on the ratemaking and regulatory process, environmental regulations, foreign currency rate fluctuations and economic conditions. They are also expected to provide earnings from construction projects when completed and from other investments, but will require substantial funding for these investments.

Capital Project Updates

We summarize below information regarding major projects in process at Sempra South American Utilities. Chilquinta Energía's Eletrans' projects are being financed by the JV partners during construction, and other financing may be pursued upon project completion. Luz del Sur is financing its projects through its existing debt program.

CAPITAL PROJECTS UNDER CONSTRUCTION – SEMPRA SOUTH AMERICAN UTILITIES

Project description	Our share of estimated capital cost (in millions)	Status
Chilquinta Energía - New Technical Norm Project		
<ul style="list-style-type: none"> ▪ Implementation of new quality of service and operating standards for distribution business. ▪ Includes deployment of smart meters to approximately 700,000 customers, automation of operations and grid modernization. ▪ Costs to be recovered through incremental regulated tariff authorized in September 2018. 	\$353	▪ Estimated completion: 2025
Chilquinta Energía - Eletrans II S.A.		
<ul style="list-style-type: none"> ▪ Two 220-kV transmission lines awarded in June 2013. ▪ Transmission lines to extend approximately 78 miles in total. ▪ Once in operation, will earn a return in U.S. dollars, indexed to the CPI, for 20 years and a regulated return thereafter. ▪ 50-percent equity interest in JV. 	\$46	▪ Estimated completion: 2020
Chilquinta Energía - Eletrans III S.A.		
<ul style="list-style-type: none"> ▪ 220-kV transmission line awarded in June 2017. ▪ Transmission line in the northern region of Chile to extend approximately 133 miles. ▪ Once in operation, will earn a return in U.S. dollars, indexed to the CPI, for 20 years and a regulated return thereafter. ▪ 50-percent equity interest in JV. 	\$50	▪ Estimated completion: 2022
Luz Del Sur - Lima Substations and Transmission Lines (second investment)		
<ul style="list-style-type: none"> ▪ Amended transmission investment plan includes development and operation of seven substations and related transmission lines. ▪ Once in operation, the capitalized cost of the projects will earn a regulated return for 30 years. ▪ Completed one substation and related transmission lines in 2018. 	\$239	▪ Estimated completion: 2019 through 2020 as portions are completed

Acquisition of CTNG

On December 18, 2018, Chilquinta Energía acquired a 100-percent interest in CTNG through a sales and purchase agreement with AES Gener S.A. and its subsidiary Sociedad Eléctrica Angamos S.A. CTNG owns regulated transmission assets in the Valparaiso, Metropolitana and Antofagasta regions of Chile. The fully operating transmission assets include a 114-mile, 110-kV single-circuit transmission line, an 82-mile, 220-kV double-circuit transmission line, substations and other transmission assets. CTNG's regulated revenues are based on tariffs that are set by the CNE and are reviewed by the CNE every four years. This business acquisition aligns with Chilquinta Energía's business model of owning and operating regulated transmission and distribution assets. We paid the purchase price of \$208 million, net of cash acquired, with available cash on hand at Sempra South American Utilities. We discuss this acquisition further in Note 5 of the Notes to Consolidated Financial Statements.

Regulated Rates

We describe the ratemaking process in Chile and Peru in “Item 1. Business – Ratemaking Mechanisms – Sempra South American Utilities.” We describe rate setting resolutions made in 2018 in Note 4 of the Notes to Consolidated Financial Statements.

Luz del Sur - Potential Impact from Tolling Customers

Luz del Sur is an electric distribution utility that provides electric services, including the supply of electricity, to regulated and non-regulated customers. Non-regulated customers consist of free and tolling customers. Luz del Sur supplies electricity to its customers from power purchased from generators under long-term, take-or-pay PPAs. A free customer has the option of purchasing electricity directly from Luz del Sur, while paying fees to Luz del Sur for generation, transmission (primary and secondary) and distribution services, or choosing to become a tolling customer. A tolling customer purchases electricity from alternative suppliers and pays only a tolling fee to Luz del Sur for secondary transmission and distribution. To the extent customers have the right to and choose to become tolling customers, Luz del Sur may be exposed to stranded costs related to capacity charges under its long-term, take-or-pay PPAs. We discuss Luz del Sur’s customers and demand in “Item 1. Business.”

SEMPRA MEXICO

Capital Project Updates

We summarize major projects in process at Sempra Mexico below.

CAPITAL PROJECTS UNDER CONSTRUCTION – SEMPRA MEXICO – GAS BUSINESS

Project description	Our share of estimated capital cost (in millions)	Status
Sur de Texas-Tuxpan Marine Pipeline		
<ul style="list-style-type: none"> ▪ IMG was awarded the right to build, own and operate the natural gas marine pipeline in June 2016 by the CFE. ▪ Sempra Mexico has a 40-percent interest in IMG, a JV with TransCanada, which owns the remaining 60-percent interest. ▪ Natural gas transportation services agreement for a 25-year term, denominated in U.S. dollars. 	\$992	<ul style="list-style-type: none"> ▪ Estimated completion: second quarter of 2019
Terminals at Port of Veracruz, Puebla and Mexico City		
<ul style="list-style-type: none"> ▪ Awarded a 20-year concession in July 2017 to build and operate a marine terminal in the Port of Veracruz in Mexico for the receipt, storage and delivery of liquid fuels. ▪ Planned storage capacity of 2.1 million barrels. ▪ Working capacity of 1.4 million barrels of gasoline, diesel and jet fuel to supply the central region of Mexico. ▪ IEnova will also build and operate two storage terminals located near Puebla and Mexico City, each with storage capacities of 650,000 barrels. ▪ Entered into three, long-term, U.S. dollar-denominated terminal services agreements in July 2017 with Valero Energy for the full capacity of the marine terminal and the two inland storage terminals. ▪ Pursuant to these agreements, Valero Energy has the option to purchase a 50-percent interest in each of the three terminals after commencement of commercial operations, subject to approval by the Port of Veracruz, COFECE, the CRE and other regulatory bodies. 	\$440	<ul style="list-style-type: none"> ▪ Expected completion of marine terminal: fourth quarter of 2019 ▪ Expected completion of two inland storage terminals: first quarter of 2020
Baja Refinados Terminal		
<ul style="list-style-type: none"> ▪ Plan to develop, construct and operate a liquid fuels marine storage terminal within the La Jovita Energy Center, located 14 miles north of Ensenada, Baja California, Mexico. ▪ Capacity of 1 million barrels of hydrocarbons, primarily gasoline and diesel, to increase fuel supply capacity and reliability in Baja California. ▪ Fully contracted under two, long-term, U.S. dollar-denominated contracts for the receipt, storage and delivery of hydrocarbons with Chevron and BP. Chevron has the option to acquire 20 percent of the equity of the terminal after commercial operations begin. 	\$130	<ul style="list-style-type: none"> ▪ Estimated completion: fourth quarter of 2020
Topolobampo Port Administration Terminal		
<ul style="list-style-type: none"> ▪ Plan to develop, construct and operate a marine terminal for the receipt and storage of hydrocarbons, petroleum, petrochemicals and other liquids. ▪ Storage capacity of 1 million barrels, mainly for diesel and gasoline, to increase fuel supply sources and reliability in Sinaloa. ▪ Fully contracted under 15-year and 10-year, U.S. dollar-denominated contracts for the receipt, storage and delivery of hydrocarbons with Chevron and a subsidiary of Marathon Petroleum Corporation, respectively. The Chevron contract has the potential to be extended up to 30 years. The Marathon Petroleum Corporation contract has the potential to be extended indefinitely. Chevron has the option to acquire up to 25 percent of the equity of the terminal after commercial operations begin. 	\$150	<ul style="list-style-type: none"> ▪ Estimated completion: fourth quarter of 2020

CAPITAL PROJECTS UNDER CONSTRUCTION – SEMPRA MEXICO – GAS BUSINESS (CONTINUED)

Project description	Our share of estimated capital cost (in millions)	Status
Manzanillo Terminal		
<ul style="list-style-type: none"> ▪ Plan to develop, construct and operate a marine terminal for the receipt, storage and delivery of refined products in Manzanillo, Colima. ▪ Entered into a long-term, U.S. dollar-denominated agreement with Trafigura Mexico, S.A. de C.V. for 740,000 barrels of the terminal's initial storage capacity. ▪ Estimated storage capacity of 1.48 million barrels, with opportunities for expansion. ▪ 51-percent equity interest in JV, with option to increase ownership interest up to 82.5 percent. 	\$102 to \$165	<ul style="list-style-type: none"> ▪ Estimated completion: fourth quarter of 2020

CAPITAL PROJECTS UNDER CONSTRUCTION OR PENDING REGULATORY RESOLUTION – SEMPRA MEXICO – POWER BUSINESS

Project description	Our share of estimated capital cost (in millions)	Status
La Rumorosa Solar Complex		
<ul style="list-style-type: none"> ▪ Awarded 41-MW photovoltaic solar energy project located in Baja California, Mexico, in an auction conducted by Mexico's National Center of Electricity Control (Centro Nacional de Control de Energía) in September 2016. ▪ Contracted by the CFE under a 15-year renewable energy agreement and a 20-year clean energy certificate agreement, denominated in U.S. dollars. 	\$50	<ul style="list-style-type: none"> ▪ Estimated completion: first quarter of 2019
Tepezalá II Solar Complex		
<ul style="list-style-type: none"> ▪ Awarded 100-MW photovoltaic solar energy project located in Aguascalientes, Mexico, in an auction conducted by Mexico's National Center of Electricity Control in September 2016. ▪ Contracted by the CFE under 15-year renewable energy and capacity agreements and a 20-year clean energy certificate agreement, denominated in U.S. dollars. ▪ Developing and constructing in collaboration with Trina Solar, which owns a 10-percent interest in the project. IEnova has the option to purchase, and Trina Solar has the option to sell, Trina Solar's ownership interest at the end of the construction period, before operations commence. 	\$90	<ul style="list-style-type: none"> ▪ Estimated completion: second quarter of 2019
Pima Solar		
<ul style="list-style-type: none"> ▪ Awarded 110-MW photovoltaic project located in Sonora, Mexico in March 2017. ▪ Entered into a 20-year, U.S. dollar-denominated PPA in March 2017 to provide renewable energy, clean energy certificates and capacity. 	\$115	<ul style="list-style-type: none"> ▪ Completed in February 2019
Don Diego Solar Complex		
<ul style="list-style-type: none"> ▪ Plan to develop, construct and operate a 125-MW photovoltaic project located in Sonora, Mexico. ▪ In February 2018, entered into a 15-year, U.S. dollar-denominated PPA with various subsidiaries of El Puerto de Liverpool, S.A.B. de C.V. for a portion of the capacity. 	\$130	<ul style="list-style-type: none"> ▪ Estimated completion: fourth quarter of 2019
Energía Sierra Juárez 2		
<ul style="list-style-type: none"> ▪ 108-MW wind power generation facility, located in La Rumorosa, Baja California. ▪ Entered into a 20-year, U.S. dollar-denominated PPA with SDG&E in November 2017. ▪ Received CPUC approval in December 2017. 	\$150	<ul style="list-style-type: none"> ▪ Expected completion: fourth quarter of 2020 ▪ Pending FERC approval

Sempra Mexico continues to monitor CFE project opportunities and carefully analyze CFE bids in order to participate in those that fit its overall growth strategy. There can be no assurance that IEnova will be successful in bidding for new CFE projects.

The ability to successfully complete major construction projects is subject to a number of risks and uncertainties. For a discussion of these risks and uncertainties, see “Item 1A. Risk Factors.”

Energía Costa Azul LNG Terminal

Sempra LNG & Midstream and IEnova are developing a proposed natural gas liquefaction project at IEnova’s existing regasification terminal at ECA. The proposed liquefaction facility project, which we expect will be developed in two phases, is being developed to provide buyers with direct access to west coast LNG supplies. ECA currently has profitable long-term regasification contracts for 100 percent of the regasification facility’s capacity through 2028, making the decision to pursue a new liquefaction facility dependent in part on whether the investment in a new liquefaction facility would, over the long term, be more beneficial financially than continuing to supply regasification services under our existing contracts.

In November 2018, Sempra Energy and TOTAL S.A. entered into an MOU that provides a framework for cooperation for the development of the potential ECA liquefaction-export project and the potential Cameron LNG expansion project that we describe below in “Sempra LNG & Midstream – Proposed Additional Cameron Liquefaction Expansion.” The MOU contemplates TOTAL S.A. potentially contracting for up to approximately 9 Mtpa of LNG offtake across these two development projects and provides TOTAL S.A. the option to acquire an equity interest in the proposed ECA LNG liquefaction facility project, though the ultimate participation by TOTAL S.A. remains subject to finalization of definitive agreements, among other factors. The MOU does not commit any party to sign a definitive agreement or otherwise participate in the project.

In June 2018, we selected a TechnipFMC plc and Kiewit Corporation partnership as the EPC contractor for the first phase of the proposed ECA LNG liquefaction facility project (ECA LNG Phase 1). The TechnipFMC-Kiewit partnership is to perform the engineering, planning and related activities necessary to prepare, negotiate and finalize a definitive EPC contract for ECA LNG Phase 1. The current arrangement with the TechnipFMC-Kiewit partnership does not commit any party to enter into a definitive EPC contract or otherwise participate in the project.

In November 2018, Sempra LNG & Midstream and IEnova signed Heads of Agreements with affiliates of TOTAL S.A., Mitsui & Co., Ltd. and Tokyo Gas Co., Ltd. for ECA LNG Phase 1. We expect ECA LNG Phase 1 to be a single train liquefaction facility located within the existing LNG receipt terminal site with a capacity of approximately 2.4 Mtpa of LNG for export to global markets. Each Heads of Agreement for ECA LNG Phase 1 contemplates the parties negotiating definitive 20-year LNG sales and purchase agreements for the purchase of approximately 0.8 Mtpa of LNG from the ECA LNG facility, but does not obligate the parties to ultimately execute any agreements or otherwise participate in the project.

The ultimate participation of TOTAL S.A., Mitsui & Co., Ltd. and Tokyo Gas Co., Ltd. in the potential ECA LNG project as contemplated by the Heads of Agreements remains subject to finalization of definitive agreements, among other factors. The development of the ECA LNG Phase 1 and Phase 2 projects is subject to numerous risks and uncertainties, including obtaining binding customer commitments; the receipt of a number of permits and regulatory approvals; obtaining financing; negotiating and completing suitable commercial agreements, including a definitive EPC contract, equity acquisition and governance agreements, LNG sales agreements and gas supply and transportation agreements; reaching a final investment decision; and other factors associated with this potential investment. For a discussion of these risks, see “Item 1A. Risk Factors.”

SEMPRA RENEWABLES

Sempra Renewables’ performance is primarily a function of the wind (and previously solar) power generated by its assets. Power generation from these assets depends on solar and wind resource levels, weather conditions, and Sempra Renewables’ ability to maintain equipment performance.

As we discuss in Notes 5 and 6 of the Notes to Consolidated Financial Statements, in June 2018, our board of directors approved a plan to sell all our U.S. wind assets and U.S. solar assets, including our wholly and jointly owned operating facilities and projects in development in our Sempra Renewables reportable segment. In December 2018, Sempra Renewables completed the sale of all its operating solar assets, its solar and battery storage development projects and one wind generation facility to a subsidiary of Con Ed for \$1.6 billion. In February 2019, Sempra Renewables entered into an agreement with American Electric Power to sell its remaining wind assets and investments for \$551 million, subject to working capital adjustments and customary closing conditions. We expect to complete the sale in the second quarter of 2019.

Because of our expectation of a shorter holding period as a result of this plan of sale, we evaluated the recoverability of the carrying amounts of our wind and solar equity method investments and concluded there was an other-than-temporary impairment on certain of our wind equity method investments totaling \$200 million (\$145 million after tax), which we recorded in Equity Earnings in June 2018.

We may be unable to complete the sale of the remaining U.S. renewable assets, in which case we would not realize the anticipated benefits. Alternatively, even if completed, any such sale may not result in the anticipated benefits to our business, results of operations and financial condition in a timely manner or at all. Further, we could experience unexpected delays, business disruptions resulting from supporting this initiative during and following completion of these activities, decreased productivity, adverse effects on employee morale and employee turnover as a result of such initiative, any of which may impair our ability to achieve anticipated results or otherwise harm our business, results of operations and financial condition.

SEMPRA LNG & MIDSTREAM

Cameron LNG JV Three-Train Liquefaction Project

MAJOR PROJECT UNDER CONSTRUCTION – SEMPRA LNG & MIDSTREAM

Project description	Status
<p>Cameron LNG JV Three-Train Liquefaction Project</p> <ul style="list-style-type: none"> ▪ Sempra Energy contributed Cameron LNG, LLC's existing facilities to Cameron LNG JV, of which Sempra Energy indirectly owns 50.2 percent, and construction began in the second half of 2014. ▪ Estimated cost of approximately \$10 billion at the time of our final investment decision by Cameron LNG JV. ▪ Capacity of 13.9 Mtpa of LNG with an expected export capacity of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. ▪ Authorized to export the full capacity of LNG to both FTA and non-FTA countries. ▪ 20-year liquefaction and regasification tolling capacity agreements for full nameplate capacity. 	<ul style="list-style-type: none"> ▪ Based on a number of factors discussed below, we believe it is reasonable to expect that Cameron LNG JV will start generating earnings in the middle of 2019.

Construction on the current three-train liquefaction project began in the second half of 2014 under an EPC contract with a JV between CB&I, LLC (as assignee of CB&I Shaw Constructors, Inc.), a wholly owned subsidiary of McDermott International, Inc., and Chiyoda International Corporation, a wholly owned subsidiary of Chiyoda Corporation.

The total cost of the integrated Cameron LNG JV facility, including the cost of the original facility that was contributed to the project during construction, financing costs and required reserves, was estimated to be approximately \$10 billion at the time of our final investment decision.

Sempra LNG & Midstream has agreements totaling 1.45 Bcf per day of firm natural gas transportation service to the Cameron LNG JV facilities on the Cameron Interstate Pipeline with affiliates of TOTAL S.A., Mitsubishi Corporation and Mitsui & Co., Ltd. The terms of these agreements are concurrent with the liquefaction and regasification tolling capacity agreements.

Sempra Energy and the project partners executed project financing documents for senior secured debt in an aggregate principal amount up to \$7.4 billion for the purpose of financing the cost of development and construction of the Cameron LNG JV liquefaction project. Sempra Energy has entered into guarantees under which it has severally guaranteed 50.2 percent of Cameron LNG JV's obligations under the project financing and financing-related agreements, for a maximum amount of up to \$3.9 billion. The project financing and completion guarantees became effective on October 1, 2014, and the guarantees will terminate upon financial completion of the project, which will occur upon satisfaction of certain conditions, including all three trains achieving commercial operation and meeting certain operational performance tests. We expect the project to achieve financial completion and the completion guarantees to be terminated approximately nine months after all three trains achieve commercial operation.

Large-scale construction projects like the design, development and construction of the Cameron LNG JV liquefaction facility involve numerous risks and uncertainties, including among others, the potential for unforeseen engineering challenges, substantial construction delays and increased costs. Cameron LNG JV has a turnkey EPC contract, and if the contractor becomes unwilling or unable to perform according to the terms and timetable of the EPC contract, the project could face substantial construction delays and potentially significantly increased costs. If the contractor's delays or failures are serious enough to cause the contractor to default under the EPC contract, such default could result in Cameron LNG JV's engagement of a substitute contractor, which would cause further delays.

Based on a number of factors, we believe it is reasonable to expect that Cameron LNG JV will start generating earnings in the middle of 2019. These factors include, among others, the terms of the settlement agreement entered into in December 2017 with the EPC contractor to settle certain contractor's claims, the EPC contractor's progress to date, the current commissioning

activities, the remaining work to be performed, the project schedules received from the EPC contractor, Cameron LNG JV's own review of the project schedules, the assumptions underlying such schedules, and the inherent risks in constructing and testing facilities such as the Cameron LNG JV liquefaction facility. For a discussion of the Cameron LNG JV and of these risks and other risks relating to the development of the Cameron LNG JV liquefaction project that could adversely affect our future performance, see Note 6 of the Notes to Consolidated Financial Statements and "Item 1A. Risk Factors."

Project delays that occurred prior to December 2017 and the terms of the related settlement agreement between Cameron LNG JV and the EPC contractor increased the total estimated cost of the integrated Cameron LNG facility above the approximately \$10 billion estimated cost; however, the estimated increase is expected to be within our contingency associated with the project budget adopted at the time of our final investment decision and is not expected to be material to Sempra Energy.

Proposed Additional Cameron Liquefaction Expansion

Cameron LNG JV has received the major permits and FTA and non-FTA approvals necessary to expand the current configuration of the Cameron LNG JV liquefaction project from the current three liquefaction trains under construction. The proposed expansion project includes up to two additional liquefaction trains, capable of increasing LNG production capacity by approximately 9 Mtpa to 10 Mtpa, and up to two additional full containment LNG storage tanks (one of which was permitted with the original three-train project).

Under the Cameron LNG JV financing agreements, expansion of the Cameron LNG JV facilities beyond the first three trains is subject to certain restrictions and conditions, including among others, timing restrictions on expansion of the project unless appropriate prior consent is obtained from lenders. Under the Cameron LNG JV equity agreements, the expansion of the project requires the unanimous consent of all the partners, including with respect to the equity investment obligation of each partner. Discussions among the partners have been taking place regarding how an expansion may be structured. In July 2018, TOTAL S.A. acquired Engie S.A.'s interest in the Cameron LNG JV. In November 2018, Sempra Energy and TOTAL S.A. entered into an MOU that provides a framework for cooperation for the development of the potential Cameron LNG expansion project and the potential ECA liquefaction-export project that we describe above in "Sempra Mexico – Energía Costa Azul LNG Terminal." The MOU contemplates TOTAL S.A. potentially contracting for up to approximately 9 Mtpa of LNG offtake across these two development projects, though the ultimate participation of TOTAL S.A. remains subject to finalization of definitive agreements, among other factors, and TOTAL S.A. has no commitment to participate in the project. We expect that discussions on the potential expansion will continue among all the Cameron LNG JV members. There can be no assurance that a mutually agreeable expansion structure will be agreed upon unanimously by the Cameron LNG JV members, which if not accomplished in a timely manner, could materially and adversely impact the development of the expansion project. In light of this, we are unable to predict when we and/or Cameron LNG JV might be able to move forward on this expansion project.

The expansion of the Cameron LNG JV facilities beyond the first three trains is subject to a number of risks and uncertainties, including amending the Cameron LNG JV agreement among the partners, obtaining binding customer commitments, completing the required commercial agreements, securing and maintaining all necessary permits, approvals and consents, obtaining financing, reaching a final investment decision among the Cameron LNG JV partners, and other factors associated with the potential investment. See "Item 1A. Risk Factors."

Other LNG Liquefaction Development

Design, regulatory and commercial activities are ongoing for potential LNG liquefaction developments at our Port Arthur, Texas site and at Sempra Mexico's ECA facility. For these development projects, we have met with potential customers and determined there is an interest in long-term contracts for LNG supplies beginning in the 2022 to 2025 time frame.

Port Arthur

Sempra LNG & Midstream is developing a proposed natural gas liquefaction project on a greenfield site that it owns in the vicinity of Port Arthur, Texas, located along the Sabine-Neches waterway.

In November 2016, Sempra LNG & Midstream submitted an application to the FERC for approval of the siting, construction and operation of the Port Arthur liquefaction facility, along with certain natural gas pipelines that could be used to supply feed gas to the liquefaction facility, assuming the project is completed. On January 31, 2019, the FERC issued the final environmental impact statement for the project. This is the final step in the environmental review process before the FERC can proceed to issue an order approving the project.

In June 2015, Sempra LNG & Midstream filed permit applications with the DOE for authorization to export the LNG produced from the proposed Port Arthur project to all current and future non-FTA countries. In August 2015, Sempra LNG & Midstream received authorization from the DOE to export the LNG produced from the proposed project to all current and future FTA

countries. We expect to receive authorization to export to non-FTA countries assuming we receive authorization to construct the Port Arthur facility from the FERC.

In June 2018, we selected Bechtel as the EPC contractor for the proposed Port Arthur liquefaction project. Bechtel is to perform the engineering, execution planning and related activities necessary to prepare, negotiate and finalize a definitive EPC contract for the project. The current arrangement with Bechtel does not commit any party to enter into a definitive EPC contract or otherwise participate in the project.

In December 2018, Polish Oil & Gas Company (PGNiG) and Port Arthur LNG entered into a definitive 20-year agreement for the sale and purchase of 2 Mtpa of LNG per year. Under the agreement, LNG purchases by PGNiG from Port Arthur LNG will be made on a free-on-board basis, with PGNiG responsible for shipping the LNG from the Port Arthur terminal to the final destination. Port Arthur LNG will manage the gas pipeline transportation, liquefaction processing and cargo loading. The agreement is subject to certain conditions precedent, including Port Arthur LNG making a positive final investment decision.

Development of the Port Arthur LNG liquefaction project is subject to a number of risks and uncertainties, including obtaining additional customer commitments; completing the required commercial agreements, such as equity acquisition and governance agreements, LNG sales agreements and gas supply and transportation agreements; completing construction contracts; securing all necessary permits and approvals; obtaining financing and incentives; reaching a final investment decision; and other factors associated with the potential investment. See “Item 1A. Risk Factors.”

Energía Costa Azul

We further discuss Sempra LNG & Midstream’s participation in potential LNG liquefaction development at Sempra Mexico’s ECA facility above in “Sempra Mexico – Energía Costa Azul LNG Terminal.”

Natural Gas Storage Assets

As we discuss in Notes 5 and 12 of the Notes to Consolidated Financial Statements, in June 2018, our board of directors approved a plan to sell Mississippi Hub and our 90.9-percent ownership interest in Bay Gas. On February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners. Sempra LNG & Midstream received cash proceeds of \$328 million (subject to working capital adjustments and Sempra LNG & Midstream’s purchase for \$20 million of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale). As a result of the impairment charges recorded in 2018, we do not expect to recognize a gain or loss on the sale, which is subject to working capital adjustments, in 2019 because the carrying value of the assets equaled fair value, less costs to sell. At closing, ArcLight Capital Partners owns 100 percent of Mississippi Hub and Bay Gas.

OTHER SEMPRA ENERGY MATTERS

We may be impacted by rapidly changing economic conditions. These conditions may also affect our counterparties. Moreover, the dollar may fluctuate significantly compared to some foreign currencies, especially in Mexico and South America where we have significant operations. We discuss these matters in “Impact of Foreign Currency and Inflation Rates on Results of Operations” above and in “Item 7A. Quantitative and Qualitative Disclosures About Market Risk.”

North American natural gas prices, when in decline, negatively affect profitability at Sempra LNG & Midstream. Also, a reduction in projected global demand for LNG could result in increased competition among those working on projects in an environment of declining LNG demand, such as the Sempra Energy-sponsored LNG export initiatives. For a discussion of these risks and other risks involving changing commodity prices, see “Item 1A. Risk Factors.”

LITIGATION

We describe legal proceedings that could adversely affect our future performance in Note 16 of the Notes to Consolidated Financial Statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Management views certain accounting policies as critical because their application is the most relevant, judgmental, and/or material to our financial position and results of operations, and/or because they require the use of material judgments and estimates.

We describe our significant accounting policies in Note 1 of the Notes to Consolidated Financial Statements. We discuss choices among alternative accounting policies that are material to our financial statements and information concerning significant estimates with the audit committee of the Sempra Energy board of directors.

CONTINGENCIES

Sempra Energy, SDG&E, SoCalGas

We accrue losses for the estimated impacts of various conditions, situations or circumstances involving uncertain outcomes. For loss contingencies, we accrue the loss if an event has occurred on or before the balance sheet date and:

- information available through the date we file our financial statements indicates it is probable that a loss has been incurred, given the likelihood of uncertain future events; and
- the amount of the loss can be reasonably estimated.

We do not accrue contingencies that might result in gains. We continuously assess contingencies for litigation claims, environmental remediation and other events.

Details of our issues in this area are discussed in Note 16 of the Notes to Consolidated Financial Statements.

REGULATORY ACCOUNTING

Sempra Energy, SDG&E, SoCalGas

As regulated entities, the California Utilities' rates, as set and monitored by regulators, are designed to recover the cost of providing service and provide the opportunity to earn a reasonable return on their investments. The California Utilities record regulatory assets, which are generally costs that would otherwise be charged to expense, if it is probable that, through the ratemaking process, the utility will recover that asset from customers in future rates. Similarly, regulatory liabilities are recorded for amounts recovered in rates in advance or in excess of costs incurred. The California Utilities assess probabilities of future rate recovery associated with regulatory account balances at the end of each reporting period and whenever new and/or unusual events occur, such as:

- changes in the regulatory and political environment or the utility's competitive position;
- issuance of a regulatory commission order; or
- passage of new legislation.

To the extent that circumstances associated with regulatory balances change, the regulatory balances are evaluated and adjusted if appropriate.

Adverse legislative or regulatory actions could materially impact the amounts of our regulatory assets and liabilities and could materially adversely impact our financial statements. Details of the California Utilities' regulatory assets and liabilities and additional factors that management considers when assessing probabilities associated with regulatory balances are discussed in Notes 1, 4, 15 and 16 of the Notes to Consolidated Financial Statements.

INCOME TAXES

Sempra Energy, SDG&E, SoCalGas

Our income tax expense and related balance sheet amounts involve significant management judgments and estimates. Amounts of deferred income tax assets and liabilities, as well as current and noncurrent accruals, involve judgments and estimates of the timing and probability of recognition of income and deductions by taxing authorities. When we evaluate the anticipated resolution of income tax issues, we consider:

- past resolutions of the same or similar issue;
- the status of any income tax examination in progress; and
- positions taken by taxing authorities with other taxpayers with similar issues.

The likelihood of deferred income tax recovery is based on analyses of the deferred income tax assets and our expectation of future taxable income, based on our strategic planning.

Actual income taxes could vary from estimated amounts because of:

- future impacts of various items, including changes in tax laws, regulations, interpretations and rulings;
- our financial condition in future periods; and
- the resolution of various income tax issues between us and taxing and regulatory authorities.

For an uncertain position to qualify for benefit recognition, the position must have at least a more likely than not chance of being sustained (based on the position's technical merits) upon challenge by the respective authorities. The term more likely than not means a likelihood of more than 50 percent. If we do not have a more likely than not position with respect to a tax position, then we do not recognize any of the potential tax benefit associated with the position. A tax position that meets the more likely than not recognition is measured as the largest amount of tax benefit that is greater than 50 percent likely of being realized upon the effective resolution of the tax position.

Unrecognized tax benefits involve management's judgment regarding the likelihood of the benefit being sustained. The final resolution of uncertain tax positions could result in adjustments to recorded amounts and may affect our results of operations, financial position and cash flows.

We discuss details of our issues in this area and additional information related to accounting for income taxes, including uncertainty in income taxes, in Note 8 of the Notes to Consolidated Financial Statements.

DERIVATIVES AND HEDGE ACCOUNTING

Sempra Energy, SDG&E, SoCalGas

We record derivative instruments for which we do not apply a scope exception at fair value on the balance sheet. Depending on the purpose for the contract and the applicability of hedge or regulatory accounting, the changes in fair value of derivatives may be recorded in earnings, on the balance sheet, or in OCI. We also use the normal purchase or sale exception for certain derivative contracts. Whenever possible, we use exchange quoted prices or other third-party pricing to estimate fair values; if no such data is available, we use internally developed models and other techniques. The assumed collectability of derivative assets and receivables considers:

- events specific to a given counterparty;
- the tenor of the transaction; and
- the credit-worthiness of the counterparty.

The application of hedge accounting and normal purchase or sale accounting for certain derivatives is determined on a contract-by-contract basis. Significant changes in assumptions in our cash flow hedges, such as the amount and/or timing of forecasted transactions, could cause unrealized gains or losses (mark-to-market) to be reclassified out of AOCI to earnings, which may materially impact our results of operations. Additionally, changes in assumed physical delivery on contracts for which we elected normal purchase or sale accounting may result in "tainting" of the election, which may (1) preclude us from making this election in future transactions and (2) impact Sempra Energy's results of operations. Any resulting impact on the California Utilities' results of operations would not be significant because regulatory accounting principles generally apply to their contracts. We provide details of our derivative instruments and our fair value approaches in Notes 11 and 12, respectively, of the Notes to Consolidated Financial Statements.

PENSION AND OTHER POSTRETIREMENT BENEFIT PLANS

Sempra Energy, SDG&E, SoCalGas

To measure our pension and other postretirement obligations, costs and liabilities, we rely on several assumptions. We consider current market conditions, including interest rates, in making these assumptions. We review these assumptions annually and update when appropriate.

The critical assumptions used to develop the required estimates include the following key factors:

- discount rates;
- expected return on plan assets;
- health care cost trend rates;
- mortality rates;
- rate of compensation increases;
- termination and retirement rates;
- utilization of postretirement welfare benefits;
- payout elections (lump sum or annuity); and
- lump sum interest rates.

The actuarial assumptions we use may differ materially from actual results due to:

- return on plan assets;
- changing market and economic conditions;
- higher or lower withdrawal rates;
- longer or shorter participant life spans;
- more or fewer lump sum versus annuity payout elections made by plan participants; and
- higher or lower retirement rates.

These differences, other than those related to the California Utilities' plans, where rate recovery offsets the effects of the assumptions on earnings, may result in a significant impact to the amount of pension and other postretirement benefit expense we record. For plans other than those at the California Utilities, the approximate annual effect on earnings of a 100 bps increase or decrease in the assumed discount rate would be less than \$2 million and the effect of a 100 bps increase or decrease in the assumed rate of return on plan assets would be less than \$2 million. We provide details of our pension and other postretirement benefit plans in Note 9 of the Notes to Consolidated Financial Statements.

ASSET RETIREMENT OBLIGATIONS

Sempra Energy, SDG&E

SDG&E's legal AROs related to the decommissioning of SONGS are estimated based on a site-specific study performed no less than every three years. The estimate of the obligations includes:

- estimated decommissioning costs, including labor, equipment, material and other disposal costs;
- inflation adjustment applied to estimated cash flows;
- discount rate based on a credit-adjusted risk-free rate; and
- actual decommissioning costs, progress to date and expected duration of decommissioning activities.

Changes in the estimated decommissioning costs, or in the assumptions and judgments made by management underlying these estimates, could cause revisions to the estimated total cost associated with retiring the assets. SDG&E's nuclear decommissioning expenses are subject to rate recovery and, therefore, rate-making accounting treatment is applied to SDG&E's nuclear decommissioning activities. SDG&E recognizes a regulatory asset, or liability, to the extent that its SONGS ARO exceeds, or is less than, the amount collected from customers and the amount earned in SDG&E's NDT.

We provide additional detail in Note 15 of the Notes to Consolidated Financial Statements.

IMPAIRMENT TESTING OF LONG-LIVED ASSETS

Sempra Energy

Whenever events or changes in circumstances indicate that an asset's carrying amount may not be recoverable, we consider if the estimated future undiscounted cash flows are less than the carrying amount of the assets. If so, we estimate the fair value of these assets to determine the extent to which carrying value exceeds fair value. For these estimates, we may consider data from multiple valuation methods, including data from market participants. We exercise judgment to estimate the future cash flows and the useful lives of long-lived assets and to determine our intent to use the assets. Our intent to use or dispose of assets is subject to re-evaluation and can change over time.

If an impairment test is required, the fair value of long-lived assets can vary if differing estimates and assumptions are used in the valuation techniques applied as indicated by changing market or other conditions. We discuss impairment of long-lived assets in Note 1 of the Notes to Consolidated Financial Statements.

IMPAIRMENT TESTING OF GOODWILL

Sempra Energy

On an annual basis or whenever events or changes in circumstances necessitate an evaluation, we consider whether goodwill may be impaired. For our annual goodwill impairment testing, we have the option to first make a qualitative assessment of whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount before applying the two-step, quantitative goodwill impairment test. If we elect to perform the qualitative assessment, we evaluate relevant events and circumstances, including but not limited to, macroeconomic conditions, industry and market considerations, cost factors, changes in key personnel and the overall financial performance of the reporting unit. If, after assessing these qualitative factors, we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then we perform the two-step goodwill impairment test. When we perform the two-step, quantitative goodwill impairment test, we exercise judgment to develop estimates of the fair value of the reporting unit and compare that to the carrying value. Our fair value estimates are developed from the perspective of a knowledgeable market participant. We consider observable transactions in the marketplace for similar investments, if available, as well as an income-based approach such as a discounted cash flow analysis. A discounted cash flow analysis may be based directly on anticipated future revenues and expenses and may be performed based on free cash flows generated within the reporting unit. Critical assumptions that affect our estimates of fair value may include:

- consideration of market transactions;
- future cash flows;
- the appropriate risk-adjusted discount rate;
- country risk; and
- entity risk.

When we choose to make a qualitative assessment as discussed above, the two-step, quantitative goodwill impairment test is not required if we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount. If we conclude that it is more likely than not that the fair value of a reporting unit is less than its carrying amount or when we choose to proceed directly to the two-step, quantitative goodwill impairment test, the test requires us to first determine if the carrying value of a reporting unit exceeds its fair value and if so, to measure the amount of goodwill impairment, if any. When determining if goodwill is impaired, the fair value of the reporting unit and goodwill can vary if differing estimates and assumptions are used in the valuation techniques applied as indicated by changing market or other conditions. As a result, recognizing a goodwill impairment may or may not be required.

In 2018, we chose to proceed directly to the two-step, quantitative goodwill impairment test and determined that the estimated fair values of our reporting units in Mexico and South America to which goodwill was allocated were substantially above their carrying values as of October 1, 2018, our goodwill impairment testing date. We discuss goodwill in Note 1 of the Notes to Consolidated Financial Statements.

CARRYING VALUE OF EQUITY METHOD INVESTMENTS

Sempra Energy

We generally account for investments under the equity method when we have significant influence over, but do not have control of, the investee.

We consider whether the fair value of each equity investment as a whole, not the underlying net assets, has declined and whether that decline is other than temporary. To help evaluate whether a decline in fair value below carrying value has occurred and if the decline is other than temporary, we may develop fair value estimates for the investment. Our fair value estimates are developed from the perspective of a knowledgeable market participant. In the absence of observable transactions in the marketplace for similar investments, we consider an income-based approach such as a discounted cash flow analysis or, with less weighting, the replacement cost of the underlying net assets. A discounted cash flow analysis may be based directly on anticipated future distributions from the investment, or may be performed based on free cash flows generated within the entity and adjusted for our ownership share total. When calculating estimates of fair or realizable values, we also consider whether we intend to hold or sell the investment. For certain investments, critical assumptions may include:

- equity sale offer price for the investment;
- transportation rates for natural gas;
- the appropriate risk-adjusted discount rate;
- the availability and costs of natural gas and LNG;
- competing fuels (primarily propane) and electricity;
- estimated future power generation and associated tax credits; and
- renewable power price expectations.

In addition, for our indirect investment in Oncor, critical assumptions may also include the effects of ratemaking, such as the results of regulator decisions on rates and recovery of regulated investments and costs. The risk assumptions applied by other market participants to value the investments could vary significantly or the appropriate approaches could be weighted differently. These differences could impact whether or not the fair value of the investment is less than its carrying value, and if so, whether that condition is other than temporary. This could result in an impairment charge or a different amount of impairment charge, and, in cases where an impairment charge has been recorded, additional loss or gain upon sale in the case of a sale transaction.

We provide additional details in Notes 6 and 12 of the Notes to Consolidated Financial Statements.

NEW ACCOUNTING STANDARDS

We discuss the relevant pronouncements that have recently become effective and have had or may have a significant effect on our financial statements in Note 2 of the Notes to Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of erosion of our cash flows, earnings, asset values and equity due to adverse changes in market prices, and interest and foreign currency rates.

RISK POLICIES

Sempra Energy has policies governing its market risk management and trading activities. Sempra Energy and the California Utilities maintain separate and independent risk management committees, organizations and processes for the California Utilities and for all non-CPUC regulated affiliates to provide oversight of these activities. The committees consist of senior officers who establish policy, oversee energy risk management activities, and monitor the results of trading and other activities to ensure compliance with our stated energy risk management and trading policies. These activities include, but are not limited to, daily monitoring of market positions that create credit, liquidity and market risk. The respective oversight organizations and committees are independent from the energy procurement departments.

Along with other tools, we use VaR and liquidity metrics to measure our exposure to market risk associated with the commodity portfolios. VaR is an estimate of the potential loss on a position or portfolio of positions over a specified holding period, based on normal market conditions and within a given statistical confidence interval. A liquidity metric is intended to monitor the amount of financial resources needed for meeting potential margin calls as forward market prices move. VaR and liquidity risk metrics are calculated independently by the respective risk management oversight organizations.

The California Utilities use power and natural gas derivatives to manage natural gas and electric price risk associated with servicing load requirements. The use of power and natural gas derivatives is subject to certain limitations imposed by company policy and is in compliance with risk management and trading activity plans that have been filed with and approved by the CPUC. We discuss revenue recognition in Note 1 and the additional market-risk information regarding derivative instruments in Note 11 of the Notes to Consolidated Financial Statements.

We have exposure to changes in commodity prices, interest rates and foreign currency rates and exposure to counterparty nonperformance. The following discussion of these primary market-risk exposures as of December 31, 2018 includes a discussion of how these exposures are managed.

COMMODITY PRICE RISK

Market risk related to physical commodities is created by volatility in the prices and basis of certain commodities. Our various subsidiaries are exposed, in varying degrees, to price risk, primarily to prices in the natural gas and electricity markets. Our policy is to manage this risk within a framework that considers the unique markets and operating and regulatory environments of each subsidiary.

Sempra Mexico, Sempra Renewables and Sempra LNG & Midstream are generally exposed to commodity price risk indirectly through their LNG, natural gas pipeline and storage, and power generating assets and their PPAs. These segments may utilize commodity transactions in the course of optimizing these assets. These transactions are typically priced based on market indices, but may also include fixed price purchases and sales of commodities. Any residual exposure is monitored as described above. A hypothetical 10-percent unfavorable change in commodity prices would not have resulted in a material change in the fair value of our commodity-based financial derivatives for these segments at December 31, 2018 and 2017. The impact of a change in energy commodity prices on our commodity-based financial derivative instruments at a point in time is not necessarily representative of the results that will be realized when the contracts are ultimately settled. Also, the impact of a change in energy commodity prices on our commodity-based financial derivative instruments does not typically include the generally offsetting impact of our underlying asset positions.

The California Utilities' market-risk exposure is limited due to CPUC-authorized rate recovery of the costs of commodity purchases, interstate and intrastate transportation, and storage activity. However, SoCalGas may, at times, be exposed to market risk as a result of incentive mechanisms that reward or penalize the utility for commodity costs below or above certain benchmarks for SoCalGas' GCIM. If commodity prices were to rise too rapidly, it is likely that volumes would decline. This decline would increase the per-unit fixed costs, which could lead to further volume declines. The California Utilities manage their risk within the parameters of their market risk management framework. As of and for the year ended December 31, 2018, the total VaR of the California Utilities' natural gas and electric positions was not material, and the procurement activities were in compliance with the procurement plans filed with and approved by the CPUC.

INTEREST RATE RISK

We are exposed to fluctuations in interest rates primarily as a result of our having issued short- and long-term debt. Subject to regulatory constraints, we periodically enter into interest rate swap agreements to moderate our exposure to interest rate changes and to lower our overall cost of borrowing.

The table below shows the nominal amount of debt:

NOMINAL AMOUNT OF DEBT⁽¹⁾ <i>(Dollars in millions)</i>						
	December 31, 2018			December 31, 2017		
	Sempra Energy Consolidated	SDG&E	SoCalGas	Sempra Energy Consolidated	SDG&E	SoCalGas
Short-term:						
California Utilities	\$ 547	\$ 291	\$ 256	\$ 369	\$ 253	\$ 116
Other	1,532	—	—	1,171	—	—
Long-term:						
California Utilities fixed-rate	\$ 8,377	\$ 4,918	\$ 3,459	\$ 7,877	\$ 4,868	\$ 3,009
California Utilities variable-rate	78	78	—	—	—	—
Other fixed-rate	11,531	—	—	8,367	—	—
Variable-rate	2,091	—	—	907	—	—

⁽¹⁾ After the effects of interest rate swaps. Before the effects of acquisition-related fair value adjustments, reductions/increases for unamortized discount/premium and reduction for debt issuance costs, and excluding capital lease obligations and build-to-suit lease.

Interest rate risk sensitivity analysis measures interest rate risk by calculating the estimated changes in earnings that would result from a hypothetical change in market interest rates. Earnings are affected by changes in interest rates on short-term debt and variable long-term debt. If weighted-average interest rates on short-term debt outstanding at December 31, 2018 increased or decreased by 10 percent, the change in earnings over the next 12-month period ended December 31, 2019 would be approximately \$6 million. If interest rates increased or decreased by 10 percent on all variable-rate long-term debt at December 31, 2018, after considering the effects of interest rate swaps, the change in earnings over the next 12-month period ended December 31, 2019 would be \$5 million.

We provide further information about debt and interest rate swap transactions in Notes 7 and 11, respectively, of the Notes to Consolidated Financial Statements.

We also are subject to the effect of interest rate fluctuations on the assets of our pension plans, other postretirement benefit plans, and SDG&E's NDT. However, we expect the effects of these fluctuations, as they relate to the California Utilities, to be recovered in future rates.

CREDIT RISK

Credit risk is the risk of loss that would be incurred as a result of nonperformance by our counterparties on their contractual obligations. We monitor credit risk through a credit-approval process and the assignment and monitoring of credit limits. We establish these credit limits based on risk and return considerations under terms customarily available in the industry.

As with market risk, we have policies governing the management of credit risk that are administered by the respective credit departments for each of the California Utilities and, on a combined basis, for all non-CPUC regulated affiliates and overseen by their separate risk management committees.

This oversight includes calculating current and potential credit risk on a daily basis and monitoring actual balances in comparison to approved limits. We avoid concentration of counterparties whenever possible, and we believe our credit policies significantly reduce overall credit risk. These policies include an evaluation of:

- prospective counterparties' financial condition (including credit ratings);
- collateral requirements;
- the use of standardized agreements that allow for the netting of positive and negative exposures associated with a single counterparty; and
- downgrade triggers.

We believe that we have provided adequate reserves for counterparty nonperformance.

When its development projects become operational, Sempra Energy relies significantly on the ability of suppliers to perform under long-term agreements and on our ability to enforce contract terms in the event of nonperformance. Also, the factors that we consider in evaluating a development project include negotiating customer and supplier agreements and, therefore, we rely on these agreements for future performance. We also may condition our decision to go forward on development projects on first obtaining these customer and supplier agreements.

As noted above in “Interest Rate Risk,” we periodically enter into interest rate swap agreements to moderate exposure to interest rate changes and to lower the overall cost of borrowing. We would be exposed to interest rate fluctuations on the underlying debt should a counterparty to the swap fail to perform.

CREDIT RATINGS

The credit ratings of Sempra Energy, SDG&E and SoCalGas remained at investment grade levels in 2018. At December 31, 2018:

- Moody’s issuer rating for Sempra Energy was Baa1 with a negative outlook, A2 with a stable outlook for SDG&E and its long-term rating for SoCalGas was A1 with a stable outlook;
- S&P’s issuer credit rating for Sempra Energy was BBB+ with a negative outlook, A- with a negative outlook for SDG&E and A with a negative outlook for SoCalGas; and
- Fitch Ratings’ long-term issuer default rating for Sempra Energy was BBB+ with a stable outlook, A- with a stable outlook for SDG&E and A with a stable outlook for SoCalGas.

On January 21, 2019, S&P downgraded SDG&E’s issuer credit rating to BBB+ from A- while maintaining its negative outlook. On January 22, 2019, Fitch Ratings affirmed SDG&E’s long-term issuer default rating at A- but revised the ratings outlook to negative from stable. On January 24, 2019, Moody’s placed SDG&E under review for downgrade. These ratings actions were primarily the result of recent wildfires in California in counties outside of the California Utilities’ electric service territory and the possible inability to recover costs and expenses in cases where California IOUs, like the California Utilities, are determined to have had equipment be the cause of a fire.

A downgrade of Sempra Energy’s or any of its subsidiaries’ credit ratings or rating outlooks may result in a requirement for collateral to be posted in the case of certain financing arrangements and may materially and adversely affect the market prices of their equity and debt securities, the rates at which borrowings are made and commercial paper is issued, and the various fees on their outstanding credit facilities. This could make it more costly for Sempra Energy, SDG&E, SoCalGas and Sempra Energy’s other subsidiaries to issue debt securities, to borrow under credit facilities and to raise certain other types of financing. We provide additional information about our credit ratings at Sempra Energy, SDG&E and SoCalGas in “Item 1A. Risk Factors.”

Sempra Energy has agreed that, if the credit rating of Oncor’s senior secured debt by any of the three major rating agencies falls below BBB (or the equivalent), Oncor will suspend dividends and other distributions (except for contractual tax payments), unless otherwise allowed by the PUCT.

Sempra Energy, SDG&E and SoCalGas have committed lines of credit to provide liquidity and to support commercial paper. Borrowings under these facilities bear interest at benchmark rates plus a margin that varies with market index rates and each borrower’s credit rating. Each facility also requires a commitment fee on available unused credit that may be impacted by each borrower’s credit rating. Under these committed lines:

- If Sempra Energy were to experience a ratings downgrade from its current level, the rate at which borrowings bear interest would increase by 25 to 50 bps, depending on the severity of the downgrade. The commitment fee on available unused credit would also increase 5 to 10 bps, depending on the severity of the downgrade.
- If SDG&E were to experience a ratings downgrade from its current level, the rate at which borrowings bear interest would increase by 12.5 bps. The commitment fee on available unused credit would also increase 2.5 bps.
- If SoCalGas were to experience a ratings downgrade from its current level, the rate at which borrowings bear interest would increase by 12.5 to 25 bps, depending on the severity of the downgrade. The commitment fee on available unused credit would also increase 2.5 to 5 bps, depending on the severity of the downgrade.

For Sempra Energy and SDG&E, their credit ratings also may affect their respective credit limits related to derivative instruments, as we discuss in Note 11 of the Notes to Consolidated Financial Statements.

FOREIGN CURRENCY AND INFLATION RATE RISK

We discuss our foreign currency and inflation exposure in “Item 7. MD&A – Impact of Foreign Currency and Inflation Rates on Results of Operations.”

The hypothetical effect for every 10 percent appreciation in the U.S. dollar against the currencies of Mexico, Chile and Peru in which we have operations and investments are as follows:

HYPOTHETICAL EFFECTS FROM 10 PERCENT STRENGTHENING OF U.S. DOLLAR

(Dollars in millions)

	Hypothetical effects
Translation of 2018 earnings to U.S. dollars ⁽¹⁾	\$ (19)
Transactional exposure, before the effects of foreign currency derivatives ⁽²⁾	100
Translation of net assets of foreign subsidiaries and investment in foreign entities ⁽³⁾	(198)

⁽¹⁾ Amount represents the impact to earnings, primarily at our South American businesses, for a change in the average exchange rate throughout the reporting period.

⁽²⁾ Amount primarily represents the effects of currency exchange rate movement from December 31, 2018 on monetary assets and liabilities and translation of non-U.S. deferred income tax balances at our Mexican subsidiaries.

⁽³⁾ Amount represents the effects of currency exchange rate movement from December 31, 2018 recorded to OCI at the end of each reporting period, primarily at our South American businesses.

Monetary assets and liabilities at our Mexican subsidiaries that are denominated in U.S. dollars may fluctuate significantly throughout the year. These monetary assets and liabilities and certain nonmonetary assets and liabilities are adjusted for Mexican inflation for Mexican income tax purposes. Based on a net monetary liability position of \$3.5 billion, including those related to our investments in JVs, at December 31, 2018, the hypothetical effect of a 10 percent increase in the Mexican inflation rate is approximately \$67 million lower earnings as a result of higher income tax expense for our consolidated subsidiaries, as well as lower equity earnings for our JVs.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements are listed on the Index to Consolidated Financial Statements set forth on page F-1 of this annual report on Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Sempra Energy, SDG&E, SoCalGas

Sempra Energy, SDG&E and SoCalGas have designed and maintain disclosure controls and procedures to ensure that information required to be disclosed in their respective reports is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and is accumulated and communicated to the management of each company, including each respective principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure. In designing and evaluating these controls and procedures, the management of each company recognizes that any system of controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives; therefore, the management of each company applies judgment in evaluating the cost-benefit relationship of other possible controls and procedures.

Under the supervision and with the participation of management, including the principal executive officers and principal financial officers of Sempra Energy, SDG&E and SoCalGas, each company evaluated the effectiveness of the design and operation of its disclosure controls and procedures as of December 31, 2018, the end of the period covered by this report. Based on these evaluations, the principal executive officers and principal financial officers of Sempra Energy, SDG&E and SoCalGas concluded that their respective company's disclosure controls and procedures were effective at the reasonable assurance level.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Sempra Energy, SDG&E, SoCalGas

The respective management of each company is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Exchange Act Rule 13a-15(f).

Under the supervision and with the participation of the management of each company, including each company's principal executive officer and principal financial officer, the effectiveness of each company's internal control over financial reporting was evaluated based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the evaluations, each company concluded that its internal control over financial reporting was effective as of December 31, 2018. Deloitte & Touche LLP audited the effectiveness of each company's internal control over financial reporting as of December 31, 2018, as stated in their reports, which are included in this annual report on Form 10-K.

There have been no changes in the companies' internal control over financial reporting during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the companies' internal control over financial reporting.

REPORTS OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Sempra Energy

To the Shareholders and Board of Directors of Sempra Energy:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Sempra Energy and subsidiaries (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018, of the Company and our report dated February 26, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

San Diego Gas & Electric Company

To the Shareholder and Board of Directors of San Diego Gas & Electric Company:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of San Diego Gas & Electric Company (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018, of the Company and our report dated February 26, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

Southern California Gas Company

To the Shareholders and Board of Directors of Southern California Gas Company:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Southern California Gas Company (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the financial statements as of and for the year ended December 31, 2018, of the Company and our report dated February 26, 2019, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

ITEM 9B. OTHER INFORMATION

None.

PART III.

Because SDG&E meets the conditions of General Instructions I(1)(a) and (b) of Form 10-K and is therefore filing this report with a reduced disclosure format as permitted by General Instruction I(2), the information required by Items 10, 11, 12 and 13 below is not required for SDG&E. We have, however, provided the information required by Item 10 with respect to SDG&E's executive officers in "Item 1. Business – Executive Officers of the Registrants."

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We provide the information required by Item 10 with respect to executive officers for Sempra Energy and SoCalGas in "Item 1. Business – Executive Officers of the Registrants." For Sempra Energy, all other information required by Item 10 is incorporated by reference from "Corporate Governance" and "Share Ownership" in the Proxy Statement to be filed for its May 2019 annual meeting of shareholders. For SoCalGas, all other information required by Item 10 is incorporated by reference from its Information Statement to be filed for its May 2019 annual meeting of shareholders.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from "Corporate Governance" and "Executive Compensation," including "Compensation Discussion and Analysis" and "Compensation Committee Report" in the Proxy Statement to be filed for the May 2019 annual meeting of shareholders for Sempra Energy and from the Information Statement to be filed for the May 2019 annual meeting of shareholders for SoCalGas.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

Information regarding securities authorized for issuance under equity compensation plans as required by Item 12 is included in "Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities."

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The security ownership information required by Item 12 is incorporated by reference from "Share Ownership" in the Proxy Statement to be filed for the May 2019 annual meeting of shareholders for Sempra Energy and in the Information Statement to be filed for the May 2019 annual meeting of shareholders for SoCalGas.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from "Corporate Governance" in the Proxy Statement to be filed for the May 2019 annual meeting of shareholders for Sempra Energy and from the Information Statement to be filed for the May 2019 annual meeting of shareholders for SoCalGas.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accountant fees and services, as required by Item 14, is presented below for Sempra Energy, SDG&E and SoCalGas. The following table shows the fees paid to Deloitte & Touche LLP, the independent registered public accounting firm for Sempra Energy, SDG&E and SoCalGas, for services provided for 2018 and 2017.

PRINCIPAL ACCOUNTANT FEES						
<i>(Dollars in thousands)</i>						
	Sempra Energy Consolidated		SDG&E		SoCalGas	
	Fees	Percent of total	Fees	Percent of total	Fees	Percent of total
2018:						
Audit fees:						
Consolidated financial statements and internal controls audits, subsidiary and statutory audits	\$ 9,998		\$ 2,454		\$ 2,719	
Regulatory filings and related services	598		80		101	
Total audit fees	10,596	82%	2,534	90%	2,820	90%
Audit-related fees:						
Employee benefit plan audits	460		143		257	
Other audit-related services, accounting consultation	1,744		54		71	
Total audit-related fees	2,204	17	197	7	328	10
Tax planning and compliance fees	97	1	73	3	—	—
All other fees	20	—	2	—	1	—
Total fees	\$ 12,917	100%	\$ 2,806	100%	\$ 3,149	100%
2017:						
Audit fees:						
Consolidated financial statements and internal controls audits, subsidiary and statutory audits	\$ 10,049		\$ 2,443		\$ 2,724	
Regulatory filings and related services	610		35		—	
Total audit fees	10,659	87%	2,478	91%	2,724	91%
Audit-related fees:						
Employee benefit plan audits	430		135		240	
Other audit-related services, accounting consultation	1,000		38		25	
Total audit-related fees	1,430	12	173	6	265	9
Tax planning and compliance fees	118	1	65	2	—	—
All other fees	47	—	21	1	2	—
Total fees	\$ 12,254	100%	\$ 2,737	100%	\$ 2,991	100%

The Audit Committee of Sempra Energy's board of directors is directly responsible for the appointment, compensation, retention and oversight of the independent registered public accounting firm for Sempra Energy and its subsidiaries, including SDG&E and SoCalGas. As a matter of good corporate governance, the SDG&E and SoCalGas boards of directors also reviewed the performance of Deloitte & Touche LLP and concurred with the determination by the Sempra Energy Audit Committee to retain them as the independent registered public accounting firm for each of Sempra Energy, SDG&E and SoCalGas. Sempra Energy's board of directors has determined that each member of its Audit Committee is an independent director and is financially literate, and that Mr. Taylor, the chair of the committee, is an audit committee financial expert as defined by the rules of the SEC.

Except where pre-approval is not required by SEC rules, Sempra Energy's Audit Committee pre-approves all audit, audit-related and permissible non-audit services provided by Deloitte & Touche LLP for Sempra Energy and its subsidiaries. The committee's pre-approval policies and procedures provide for the general pre-approval of specific types of services and give detailed guidance to management as to the services that are eligible for general pre-approval. They require specific pre-approval of all other permitted services. For both types of pre-approval, the committee considers whether the services to be provided are consistent

with maintaining the firm's independence. The policies and procedures also delegate authority to the chair of the committee to address any requests for pre-approval of services between committee meetings, with any pre-approval decisions to be reported to the committee at its next scheduled meeting.

PART IV.

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

1. FINANCIAL STATEMENTS

Our consolidated financial statements are listed on the Index to Consolidated Financial Statements set forth on page F-1 of this annual report on Form 10-K.

2. FINANCIAL STATEMENT SCHEDULES

Schedule I is listed on the Index to Condensed Financial Information of Parent as set forth on page S-1 of this annual report on Form 10-K.

Any other schedule for which provision is made in Regulation S-X is not required under the instructions contained therein, is inapplicable or the information is included in the Consolidated Financial Statements and Notes thereto in this annual report on Form 10-K.

3. EXHIBITS

EXHIBIT INDEX

The exhibits filed under the Registration Statements, Proxy Statements and Forms 8-K, 10-K and 10-Q that are incorporated herein by reference were filed under Commission File Number 1-14201 (Sempra Energy), Commission File Number 1-40 (Pacific Lighting Corporation), Commission File Number 1-03779 (San Diego Gas & Electric Company) and/or Commission File Number 1-01402 (Southern California Gas Company).

The following exhibits relate to each registrant as indicated.

EXHIBIT 2 -- PLAN OF ACQUISITION, REORGANIZATION, ARRANGEMENT, LIQUIDATION OR SUCCESSION

Sempra Energy

- 2.1 Agreement and Plan of Merger, dated as of August 21, 2017, by and among Sempra Energy, Power Play Merger Sub I, Inc. (now known as Sempra Texas Merger Sub I, Inc.), Energy Future Intermediate Holding Company LLC and Energy Future Holdings Corp. (incorporated by reference to Exhibit 2.1 to Sempra Energy's Current Report on Form 8-K, filed on August 25, 2017).
- 2.2 First Amended Joint Plan of Reorganization of Energy Future Holdings Corp., et al., Pursuant to Chapter 11 of the Bankruptcy Code (incorporated by reference to Exhibit 2.2 to Sempra Energy's Current Report on Form 8-K, filed on August 25, 2017).
- 2.3 Waiver Agreement, dated as of October 3, 2017, by and among Sempra Energy, Sempra Texas Merger Sub I, Inc., Energy Future Intermediate Holding Company LLC and Energy Future Holdings Corp. (incorporated by reference to Exhibit 2.1 to Sempra Energy's Current Report on Form 8-K, filed on October 6, 2017).
- 2.4 Amendment No. 2 to the Agreement and Plan of Merger, dated as of February 15, 2018, by and among Sempra Energy, Sempra Texas Merger Sub I, Inc., Energy Future Intermediate Holding Company LLC and Energy Future Holdings Corp. (incorporated by reference to Exhibit 2.1.3 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2018).

- 2.5 Purchase and Sale Agreement, dated as of September 20, 2018, by and between Sempra Solar Portfolio Holdings, LLC and CED Southwest Holdings, Inc. (incorporated by reference to Exhibit 2 to Sempra Energy's Current Report on Form 8-K, filed on September 20, 2018).

EXHIBIT 3 -- BYLAWS AND ARTICLES OF INCORPORATION

Sempra Energy

- 3.1 Amended and Restated Articles of Incorporation of Sempra Energy effective May 23, 2008 (incorporated by reference to Appendix B to Sempra Energy's Definitive Proxy Statement on Schedule 14A, filed on April 15, 2008).
- 3.2 Bylaws of Sempra Energy (as amended through December 15, 2015) (incorporated by reference to Exhibit 3.1 to Sempra Energy's Current Report on Form 8-K, filed on December 17, 2015).
- 3.3 Certificate of Determination of the 6% Mandatory Convertible Preferred Stock, Series A, of Sempra Energy (including the form of certificate representing the 6% Mandatory Convertible Preferred Stock, Series A), filed with the Secretary of State of the State of California and effective January 5, 2018 (incorporated by reference to Exhibit 3.1 to Sempra Energy's Current Report on Form 8-K, filed on January 9, 2018).
- 3.4 Certificate of Determination of the 6.75% Mandatory Convertible Preferred Stock, Series B, of Sempra Energy (including the form of certificate representing the 6.75% Mandatory Convertible Preferred Stock, Series B), filed with the Secretary of State of the State of California and effective July 11, 2018 (incorporated by reference to Exhibit 3.1 to Sempra Energy's Current Report on Form 8-K, filed on July 13, 2018).

San Diego Gas & Electric Company

- 3.5 Amended and Restated Articles of Incorporation of San Diego Gas & Electric Company effective August 15, 2014 (incorporated by reference to Exhibit 3.4 to SDG&E's Annual Report on Form 10-K, filed on February 26, 2015).
- 3.6 Bylaws of San Diego Gas & Electric (as amended through October 26, 2016) (incorporated by reference to Exhibit 3.1 to SDG&E's Quarterly Report on Form 10-Q, filed on November 2, 2016).

Southern California Gas Company

- 3.7 Restated Articles of Incorporation of Southern California Gas Company effective October 7, 1996 (incorporated by reference to Exhibit 3.01 to SoCalGas' Form 10-K, filed March 28, 1997).
- 3.8 Bylaws of Southern California Gas Company (as amended through January 30, 2017) (incorporated by reference to Exhibit 3.1 to SoCalGas' Current Report on Form 8-K, filed on January 31, 2017).

EXHIBIT 4 -- INSTRUMENTS DEFINING THE RIGHTS OF SECURITY HOLDERS, INCLUDING INDENTURES

The companies agree to furnish a copy of each such instrument to the Commission upon request.

Sempra Energy

- 4.1 Description of rights of Sempra Energy Common Stock (Amended and Restated Articles of Incorporation of Sempra Energy effective May 23, 2008, Exhibit 3.1 above).
- 4.2 Indenture dated as of February 23, 2000, between Sempra Energy and U.S. Bank Trust National Association, as Trustee (incorporated by reference to Exhibit 4.1 to Sempra Energy's Registration Statement on Form S-3 (No. 333-153425) filed on September 11, 2008).
- 4.3 Certificate of Determination of the 6% Mandatory Convertible Preferred Stock, Series A, of Sempra Energy (including the form of certificate representing the 6% Mandatory Convertible Preferred Stock, Series A), filed with the Secretary of State of the State of California and effective January 5, 2018 (included as Exhibit 3.3 above).
- 4.4 Certificate of Determination of the 6.75% Mandatory Convertible Preferred Stock, Series B, of Sempra Energy (including the form of certificate representing the 6.75% Mandatory Convertible Preferred Stock, Series B), filed with the Secretary of State of the State of California and effective July 11, 2018 (included as Exhibit 3.4 above).

Southern California Gas Company

- 4.5 Description of preferences of Preferred Stock, Preference Stock and Series Preferred Stock (Southern California Gas Company Restated Articles of Incorporation) (included as Exhibit 3.7 above).

Sempra Energy / San Diego Gas & Electric Company

- 4.6^(P) Mortgage and Deed of Trust dated July 1, 1940 (Registration Statement No. 2-4769, filed by SDG&E, Exhibit B-3).
- 4.7^(P) Second Supplemental Indenture dated as of March 1, 1948 (Registration Statement No. 2-7418, filed by SDG&E, Exhibit B-5B).
- 4.8^(P) Ninth Supplemental Indenture dated as of August 1, 1968 (Registration Statement No. 333-52150, filed by SDG&E, Exhibit 4.5).
- 4.9^(P) Tenth Supplemental Indenture dated as of December 1, 1968 (Registration Statement No. 2-36042, filed by SDG&E, Exhibit 2-K).
- 4.10^(P) Sixteenth Supplemental Indenture dated August 28, 1975 (Registration Statement No. 33-34017, filed by SDG&E, Exhibit 4.2).

Sempra Energy / Southern California Gas Company

- 4.11^(P) First Mortgage Indenture of Southern California Gas Company to American Trust Company dated October 1, 1940 (Registration Statement No. 2-4504 filed by Southern California Gas Company, Exhibit B-4).
- 4.12^(P) Supplemental Indenture of Southern California Gas Company to American Trust Company dated as of August 1, 1955 (Registration Statement No. 2-11997, filed by Pacific Lighting Corporation, Exhibit 4.07).
- 4.13 Supplemental Indenture of Southern California Gas Company to American Trust Company dated as of December 1, 1956 (incorporated by reference to Exhibit 4.09 to Sempra Energy's Annual Report on Form 10-K, filed on February 23, 2007).
- 4.14 Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank dated as of June 1, 1965 (incorporated by reference to Exhibit 4.10 to Sempra Energy's Annual Report on Form 10-K, filed on February 23, 2007).
- 4.15^(P) Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of August 1, 1972 (Registration Statement No. 2-59832, filed by Southern California Gas Company, Exhibit 2.19).
- 4.16^(P) Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of May 1, 1976 (Registration Statement No. 2-56034, filed by Southern California Gas Company, Exhibit 2.20).
- 4.17^(P) Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of September 15, 1981 (Registration Statement No. 333-70654, filed by Southern California Gas Company, Exhibit 4.24).

EXHIBIT 10 -- MATERIAL CONTRACTS

Sempra Energy

- 10.1 Plan Support Agreement, dated as of August 21, 2017 (incorporated by reference to Exhibit 10.1 to Sempra Energy's Current Report on Form 8-K filed on August 25, 2017).
- 10.2 Oncor Letter Agreement, dated as of August 25, 2017 (incorporated by reference to Exhibit 10.1 to Sempra Energy's Current Report on Form 8-K filed on August 28, 2017).
- 10.3 Confirmation of Registered Forward Transaction, dated January 4, 2018, by and between Sempra Energy and Morgan Stanley & Co. LLC (incorporated by reference to Exhibit 1.3 to Sempra Energy's Current Report on Form 8-K, filed on January 9, 2018).
- 10.4 Confirmation of Registered Forward Transaction, dated January 4, 2018, by and between Sempra Energy and Royal Bank of Canada (incorporated by reference to Exhibit 1.4 to Sempra Energy's Current Report on Form 8-K, filed on January 9, 2018).
- 10.5 Confirmation of Registered Forward Transaction, dated January 4, 2018, by and between Sempra Energy and Barclays Bank plc (incorporated by reference to Exhibit 1.5 to Sempra Energy's Current Report on Form 8-K, filed on January 9, 2018).
- 10.6 Amendment to Confirmation of Registered Forward Transaction, dated February 27, 2018, by and between Sempra Energy and Morgan Stanley & Co. LLC (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.7 Amendment to Confirmation of Registered Forward Transaction, dated February 27, 2018, by and between Sempra Energy and Royal Bank of Canada (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.8 Amendment to Confirmation of Registered Forward Transaction, dated February 27, 2018, by and between Sempra Energy and Barclays Bank plc (incorporated by reference to Exhibit 10.6 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).

- 10.9 Confirmation of Registered Forward Transaction, dated July 10, 2018, by and between Sempra Energy and Citibank, N.A. (incorporated by reference to Exhibit 1.3 to Sempra Energy's Current Report on Form 8-K, filed on July 13, 2018).
- 10.10 Confirmation of Registered Forward Transaction, dated July 10, 2018, by and between Sempra Energy and JPMorgan Chase Bank, National Association, London Branch (incorporated by reference to Exhibit 1.4 to Sempra Energy's Current Report on Form 8-K, filed on July 13, 2018).
- 10.11 Cooperation Agreement, dated as of September 18, 2018, by and between Elliott Associates, L.P., Elliott International, L.P., Bluescape Resources Company LLC, Cove Key Management, LP and Sempra Energy (incorporated by reference to Exhibit 10.1 to Sempra Energy's Current Report on Form 8-K, filed on September 18, 2018).

Sempra Energy / San Diego Gas & Electric Company / Southern California Gas Company

- 10.12 Form of Continental Forge and California Class Action Price Reporting Settlement Agreement dated as of January 4, 2006 (incorporated by reference to Exhibit 99.1 to Sempra Energy's Form 8-K, filed on January 5, 2006).

Sempra Energy / San Diego Gas & Electric Company

- 10.13 Amended and Restated Operating Order between San Diego Gas & Electric Company and the California Department of Water Resources effective March 10, 2011 (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2011).
- 10.14 Amended and Restated Servicing Order between San Diego Gas & Electric Company and the California Department of Water Resources effective March 10, 2011 (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2011).

Compensation

Sempra Energy / San Diego Gas & Electric Company / Southern California Gas Company

- 10.15 Form of Indemnification Agreement with Directors and Executive Officers (executed after January 2011) (incorporated by reference to Exhibit 10.1 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 4, 2016).
- 10.16 Form of Sempra Energy Shared Services Executive Incentive Compensation Plan (incorporated by reference to Exhibit 10.19 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2014).
- 10.17 Amended and Restated Sempra Energy 2013 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.18 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Index (incorporated by reference to Exhibit 10.8 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.19 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Utilities Index (incorporated by reference to Exhibit 10.9 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.20 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (incorporated by reference to Exhibit 10.10 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.21 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Time-Based Restricted Stock Unit Award - Cliff vest (incorporated by reference to Exhibit 10.11 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.22 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Special Time-Based Restricted Stock Unit Award - Two-year vest (incorporated by reference to Exhibit 10.12 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.23 Form of Sempra Energy 2013 Long-Term Incentive Plan 2018 Special Time-Based Restricted Stock Unit Award - Multi-year vest (incorporated by reference to Exhibit 10.13 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).
- 10.24 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Index (incorporated by reference to Exhibit 10.7 to Sempra Energy's Annual Report on Form 10-K, filed on February 28, 2017).

- 10.25 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Utilities Index (incorporated by reference to Exhibit 10.8 to Sempra Energy's Annual Report on Form 10-K, filed on February 28, 2017).
- 10.26 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (incorporated by reference to Exhibit 10.9 to Sempra Energy's Annual Report on Form 10-K, filed on February 28, 2017).
- 10.27 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (incorporated by reference to Exhibit 10.6 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.28 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (incorporated by reference to Exhibit 10.7 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.29 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 and 2017 Restricted Stock Unit Award (incorporated by reference to Exhibit 10.8 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.30 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.12 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.31 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (incorporated by reference to Exhibit 10.19 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2015).
- 10.32 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (incorporated by reference to Exhibit 10.20 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2015).
- 10.33 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - Cameron LNG and Cumulative Net Income (incorporated by reference to Exhibit 10.21 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2015).
- 10.34 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Restricted Stock Unit Award (incorporated by reference to Exhibit 10.1 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 2, 2014).
- 10.35 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (incorporated by reference to Exhibit 10.2 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 2, 2014).
- 10.36 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (incorporated by reference to Exhibit 10.3 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 2, 2014).
- 10.37 Sempra Energy 2008 Long Term Incentive Plan (incorporated by reference to Appendix A to Sempra Energy's Definitive Proxy Statement on Schedule 14A, filed on April 15, 2008).
- 10.38 Form of Sempra Energy 2008 Long Term Incentive Plan, 2009 Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.2 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 5, 2009).
- 10.39 Form of Sempra Energy 2008 Long Term Incentive Plan, 2008 Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 7, 2008).
- 10.40 Amended and Restated Sempra Energy 2005 Deferred Compensation Plan, now known as Sempra Energy Employee and Director Retirement Savings Plan.
- 10.41 Amended and Restated Sempra Energy Deferred Compensation and Excess Savings Plan (incorporated by reference to Exhibit 10.28 to Sempra Energy's Annual Report on Form 10-K, filed on February 28, 2017).
- 10.42 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective July 1, 2009 (incorporated by reference to Exhibit 10.28 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).

- 10.43 First Amendment to the 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective February 11, 2010 (incorporated by reference to Exhibit 10.29 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.44 Second Amendment to the 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective January 1, 2014 (incorporated by reference to Exhibit 10.43 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2015).
- 10.45 2015 Amendment and Restatement of the Sempra Energy Cash Balance Restoration Plan effective November 10, 2015 (incorporated by reference to Exhibit 10.31 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.46 Sempra Energy Amended and Restated Executive Life Insurance Plan (incorporated by reference to Exhibit 10.22 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2013).
- 10.47 Sempra Energy Executive Personal Financial Planning Program Policy Document (incorporated by reference to Exhibit 10.11 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2004).
- 10.48 Form of Indemnification Agreement with Directors and Executive Officers (incorporated by reference to Exhibit 10.2 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 7, 2008).
- 10.49 Sempra Energy Amended and Restated Executive Medical Plan (incorporated by reference to Exhibit 10.26 to Sempra Energy's Annual Report on Form 10-K, filed on February 24, 2009).
- 10.50 Severance Pay Agreement between Sempra Energy and P. Kevin Chase, dated March 4, 2017.
- 10.51 Severance Pay Agreement between Sempra Energy and Bruce A. Folkmann, dated March 1, 2017 (incorporated by reference to Exhibit 10.15 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).

Sempra Energy

- 10.52 Sempra Energy Executive Incentive Plan effective January 1, 2003 (incorporated by reference to Exhibit 10.09 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2003).
- 10.53 Amended and Restated Severance Pay Agreement between Sempra Energy and Jeffrey W. Martin, dated May 1, 2018 (incorporated by reference to Exhibit 10.3 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 6, 2018).
- 10.54 Amended and Restated Severance Pay Agreement between Sempra Energy and Trevor I. Mihalik, dated May 1, 2018 (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 6, 2018).
- 10.55 Severance Pay Agreement between Sempra Energy and Dennis Arriola, dated January 1, 2017 (incorporated by reference to Exhibit 10.42 to Sempra Energy's Annual Report on Form 10-K, filed on February 28, 2017).
- 10.56 Severance Pay Agreement between Sempra Energy and Debra L. Reed dated March 1, 2017 (incorporated by reference to Exhibit 10.1 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.57 Amended and Restated Severance Pay Agreement between Sempra Energy and Joseph A. Householder dated May 1, 2018 (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 6, 2018).
- 10.58 Severance Pay Agreement between Sempra Energy and Martha B. Wyrsh dated March 1, 2017 (incorporated by reference to Exhibit 10.3 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.59 Severance Pay Agreement between Sempra Energy and G. Joyce Rowland dated March 1, 2017 (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.60 Amended and Restated Severance Pay Agreement between Sempra Energy and Peter R. Wall dated May 1, 2018 (incorporated by reference to Exhibit 10.6 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 6, 2018).
- 10.61 Form of Sempra Energy Non-Employee Directors' Restricted Stock Unit Award (incorporated by reference to Exhibit 10.59 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2015).
- 10.62 Form of 2017 and 2018 Sempra Energy Non-Employee Directors' Initial Restricted Stock Unit Award (incorporated by reference to Exhibit 10.50 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2018).

- 10.63 Form of Sempra Energy 2008 Non-Employee Directors' Stock Plan, Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 7, 2008).
- 10.64 Sempra Energy Amended and Restated Sempra Energy Retirement Plan for Directors (incorporated by reference to Exhibit 10.7 to Sempra Energy's Quarterly Report on Form 10-Q, filed on August 7, 2008).
- 10.65 Sempra Energy Annual Incentive Plan (incorporated by reference to Exhibit 10.7 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 7, 2018).

Sempra Energy / San Diego Gas & Electric Company

- 10.66 Form of San Diego Gas & Electric Company Executive Incentive Compensation Plan (incorporated by reference to Exhibit 10.64 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2014).
- 10.67 Severance Pay Agreement between Sempra Energy and Caroline A. Winn dated March 1, 2017 (incorporated by reference to Exhibit 10.6 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.68 Severance Pay Agreement between Sempra Energy and Diana L. Day dated March 1, 2017.
- 10.69 Severance Pay Agreement between Sempra Energy and Randall L. Clark dated March 1, 2017 (incorporated by reference to Exhibit 10.8 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.70 Severance Pay Agreement between Sempra Energy and Scott D. Drury dated August 25, 2018 (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 7, 2018).
- 10.71 Severance Pay Agreement between Sempra Energy and Kevin C. Sagara dated September 8, 2018 (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 7, 2018).

Sempra Energy / Southern California Gas Company

- 10.72 Form of Southern California Gas Company Executive Incentive Compensation Plan (incorporated by reference to Exhibit 10.71 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2014).
- 10.73 Severance Pay Agreement between Sempra Energy and Patricia K. Wagner dated March 1, 2017 (incorporated by reference to Exhibit 10.9 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.74 Severance Pay Agreement between Sempra Energy and J. Bret Lane, dated March 1, 2017 (incorporated by reference to Exhibit 10.10 to Sempra Energy's Quarterly Report on Form 10-Q, filed on May 9, 2017).
- 10.75 Severance Pay Agreement between Sempra Energy and Jimmie I. Cho, dated March 1, 2017.
- 10.76 Severance Pay Agreement between Sempra Energy and Gillian A. Wright, dated March 1, 2017.
- 10.77 Severance Pay Agreement between Sempra Energy and David J. Barrett, dated January 12, 2019.

Nuclear

Sempra Energy / San Diego Gas & Electric Company

- 10.78^(P) Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station, approved November 25, 1987 (1992 Annual Report on Form 10-K, filed by SDG&E, Exhibit 10.7).
- 10.79 Amendment No. 1 to the Qualified CPUC Decommissioning Master Trust Agreement dated September 22, 1994 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.56 to SDG&E's Annual Report on Form 10-K, filed on February 28, 1995).
- 10.80 Second Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.57 to SDG&E's Annual Report on Form 10-K, filed on February 28, 1995).
- 10.81 Third Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.59 to SDG&E's Annual Report on Form 10-K, filed on March 19, 1997).

- 10.82 Fourth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.60 to SDG&E's Annual Report on Form 10-K, filed on March 19, 1997).
- 10.83 Fifth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.26 to SDG&E's Annual Report on Form 10-K, filed on March 29, 2000).
- 10.84 Sixth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.27 to SDG&E's Annual Report on Form 10-K, filed on March 29, 2000).
- 10.85 Seventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated December 24, 2003 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.42 to Sempra Energy's Annual Report on Form 10-K, filed on February 25, 2004).
- 10.86 Eighth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated October 12, 2011 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.70 to SDG&E's Annual Report on Form 10-K, filed on February 28, 2012).
- 10.87 Ninth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 9, 2014 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.83 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2014).
- 10.88 Tenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.1 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.89 Eleventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.2 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.90 Twelfth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.3 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.91 Thirteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 1, 2015 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.78 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.92 Fourteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated February 18, 2016 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.1 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 2, 2016).
- 10.93 Fifteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 31, 2016 (see Exhibit 10.78 above) (incorporated by reference to Exhibit 10.2 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 2, 2016).
- 10.94^(P) Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station, approved November 25, 1987 (1992 Annual Report on Form 10-K, filed by SDG&E, Exhibit 10.8).
- 10.95 First Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.62 to SDG&E's Annual Report on Form 10-K, filed March 19, 1997).
- 10.96 Second Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.63 to SDG&E's Annual Report on Form 10-K, filed March 19, 1997).
- 10.97 Third Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.31 to SDG&E's Annual Report on Form 10-K, filed March 29, 2000).

- 10.98 Fourth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.32 to SDG&E's Annual Report on Form 10-K, filed March 29, 2000).
- 10.99 Fifth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated December 24, 2003 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.48 to Sempra Energy's Annual Report on Form 10-K, filed February 25, 2004).
- 10.10 Sixth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated October 12, 2011 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.77 to SDG&E's Annual Report on Form 10-K, filed February 28, 2012).
- 10.101 Seventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 9, 2014 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.91 to Sempra Energy's Annual Report on Form 10-K, filed on February 27, 2014).
- 10.102 Eighth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.103 Ninth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.5 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.104 Tenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.6 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 4, 2014).
- 10.105 Eleventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 1, 2015 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.90 to Sempra Energy's Annual Report on Form 10-K, filed on February 26, 2016).
- 10.106 Twelfth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated February 18, 2016 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.3 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 2, 2016).
- 10.107 Thirteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 31, 2016 (see Exhibit 10.94 above) (incorporated by reference to Exhibit 10.4 to Sempra Energy's Quarterly Report on Form 10-Q, filed on November 2, 2016).
- 10.108^(P) U. S. Department of Energy contract for disposal of spent nuclear fuel and/or high-level radioactive waste, entered into between the DOE and Southern California Edison Company, as agent for SDG&E and others; Contract DE-CR01-83NE44418, dated June 10, 1983 (1988 Annual Report on Form 10-K, filed by SDG&E, Exhibit 10N).

EXHIBIT 14 -- CODE OF ETHICS

San Diego Gas & Electric Company / Southern California Gas Company

- 14.1 Sempra Energy Code of Business Conduct and Ethics for Board of Directors and Senior Officers (also applies to directors and officers of San Diego Gas & Electric Company and Southern California Gas Company) (incorporated by reference to Exhibit 14.01 of SDG&E's and SoCalGas' Annual Reports on Forms 10-K, filed on February 23, 2007).

EXHIBIT 21 -- SUBSIDIARIES

Sempra Energy

- 21.1 Sempra Energy Schedule of Certain Subsidiaries at December 31, 2018.

EXHIBIT 23 -- CONSENTS OF EXPERTS AND COUNSEL

Sempra Energy

- 23.1 Sempra Energy Consent of Independent Registered Public Accounting Firm.
- 23.2 Oncor Electric Delivery Holdings Company LLC Consent of Independent Auditors.

San Diego Gas & Electric Company

- 23.3 San Diego Gas & Electric Company Consent of Independent Registered Public Accounting Firm.

Southern California Gas Company

- 23.4 Southern California Gas Company Consent of Independent Registered Public Accounting Firm.

EXHIBIT 31 -- SECTION 302 CERTIFICATIONS

Sempra Energy

- 31.1 Certification of Sempra Energy's Principal Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.2 Certification of Sempra Energy's Principal Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

San Diego Gas & Electric Company

- 31.3 Certification of San Diego Gas & Electric Company's Principal Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.4 Certification of San Diego Gas & Electric Company's Principal Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

Southern California Gas Company

- 31.5 Certification of Southern California Gas Company's Principal Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.6 Certification of Southern California Gas Company's Principal Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

EXHIBIT 32 -- SECTION 906 CERTIFICATIONS

Sempra Energy

- 32.1 Certification of Sempra Energy's Principal Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.2 Certification of Sempra Energy's Principal Financial Officer pursuant to 18 U.S.C. Sec. 1350.

San Diego Gas & Electric Company

- 32.3 Certification of San Diego Gas & Electric Company's Principal Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.4 Certification of San Diego Gas & Electric Company's Principal Financial Officer pursuant to 18 U.S.C. Sec. 1350.

Southern California Gas Company

- 32.5 Certification of Southern California Gas Company's Principal Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.6 Certification of Southern California Gas Company's Principal Financial Officer pursuant to 18 U.S.C. Sec. 1350.

EXHIBIT 99 -- ADDITIONAL EXHIBITS

Sempra Energy

- 99.1 Audited consolidated financial statements of Oncor Electric Delivery Holdings Company LLC and subsidiary as of December 31, 2018 and 2017 and for each of the three years ended in the period ended December 31, 2018, and the related Independent Auditors' Report.

EXHIBIT 101 -- INTERACTIVE DATA FILE

- 101.INS XBRL Instance Document - the instance document does not appear in the Interactive Data file because its XBRL tags are embedded within the Inline XBRL document.
- 101.SCH XBRL Taxonomy Extension Schema Document
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

^(P) Exhibit previously filed with the SEC in paper format.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

Sempra Energy:**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SEMPRA ENERGY,
(Registrant)

By: /s/ J. Walker Martin

J. Walker Martin
Chairman and Chief Executive Officer

Date: February 26, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer: J. Walker Martin Chief Executive Officer	<u>/s/ J. Walker Martin</u>	February 26, 2019
Principal Financial Officer: Trevor I. Mihalik Executive Vice President and Chief Financial Officer	<u>/s/ Trevor I. Mihalik</u>	February 26, 2019
Principal Accounting Officer: Peter R. Wall Vice President, Controller and Chief Accounting Officer	<u>/s/ Peter R. Wall</u>	February 26, 2019
Directors: J. Walker Martin, Chairman	<u>/s/ J. Walker Martin</u>	February 26, 2019
Alan L. Boeckmann, Director	<u>/s/ Alan L. Boeckmann</u>	February 26, 2019
Kathleen L. Brown, Director	<u>/s/ Kathleen L. Brown</u>	February 26, 2019
Andrés Conesa, Director	<u>/s/ Andrés Conesa</u>	February 26, 2019
Maria Contreras-Sweet, Director	<u>/s/ Maria Contreras-Sweet</u>	February 26, 2019
Pablo A. Ferrero, Director	<u>/s/ Pablo A. Ferrero</u>	February 26, 2019
William D. Jones, Director	<u>/s/ William D. Jones</u>	February 26, 2019
Michael N. Mears, Director	<u>/s/ Michael N. Mears</u>	February 26, 2019
William G. Ouchi, Ph.D., Director	<u>/s/ William G. Ouchi</u>	February 26, 2019
William C. Rusnack, Director	<u>/s/ William C. Rusnack</u>	February 26, 2019
Lynn Schenk, Director	<u>/s/ Lynn Schenk</u>	February 26, 2019
Jack T. Taylor, Director	<u>/s/ Jack T. Taylor</u>	February 26, 2019
Cynthia L. Walker, Director	<u>/s/ Cynthia L. Walker</u>	February 26, 2019
James C. Yardley, Director	<u>/s/ James C. Yardley</u>	February 26, 2019

San Diego Gas & Electric Company:

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SAN DIEGO GAS & ELECTRIC COMPANY,
(Registrant)

By: /s/ Kevin C. Sagara

Kevin C. Sagara
Chairman and Chief Executive Officer

Date: February 26, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934 (the Act), this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer: Kevin C. Sagara Chief Executive Officer	<u>/s/ Kevin C. Sagara</u>	February 26, 2019
Principal Financial and Accounting Officer: Bruce A. Folkmann Vice President, Controller, Chief Financial Officer and Chief Accounting Officer	<u>/s/ Bruce A. Folkmann</u>	February 26, 2019
Directors: Kevin C. Sagara, Chairman	<u>/s/ Kevin C. Sagara</u>	February 26, 2019
Scott D. Drury, Director	<u>/s/ Scott D. Drury</u>	February 26, 2019
Trevor I. Mihalik, Director	<u>/s/ Trevor I. Mihalik</u>	February 26, 2019
G. Joyce Rowland, Director	<u>/s/ G. Joyce Rowland</u>	February 26, 2019
Caroline A. Winn, Director	<u>/s/ Caroline A. Winn</u>	February 26, 2019
Martha B. Wyrsh, Director	<u>/s/ Martha B. Wyrsh</u>	February 26, 2019

SUPPLEMENTAL INFORMATION TO BE FURNISHED WITH REPORTS FILED PURSUANT TO SECTION 15(d) OF THE ACT BY REGISTRANTS WHICH HAVE NOT REGISTERED SECURITIES PURSUANT TO SECTION 12 OF THE ACT:

No annual report, proxy statement, form of proxy or other soliciting material has been sent to security holders during the period covered by this annual report on Form 10-K, and no such materials are to be furnished to security holders subsequent to the filing of this annual report on Form 10-K.

Southern California Gas Company:**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOUTHERN CALIFORNIA GAS COMPANY,
(Registrant)

By: /s/ J. Bret Lane

J. Bret Lane
President and Chief Executive Officer

Date: February 26, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer: J. Bret Lane President and Chief Executive Officer	<u>/s/ J. Bret Lane</u>	February 26, 2019
Principal Financial and Accounting Officer: Bruce A. Folkmann Vice President, Controller, Chief Financial Officer and Chief Accounting Officer	<u>/s/ Bruce A. Folkmann</u>	February 26, 2019
Directors: Patricia K. Wagner, Non-Executive Chairman	<u>/s/ Patricia K. Wagner</u>	February 26, 2019
J. Bret Lane, Director	<u>/s/ J. Bret Lane</u>	February 26, 2019
Trevor I. Mihalik, Director	<u>/s/ Trevor I. Mihalik</u>	February 26, 2019
Martha B. Wyrsh, Director	<u>/s/ Martha B. Wyrsh</u>	February 26, 2019

SEMPRA ENERGY
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REPORTS OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

SEMPRA ENERGY

To the Shareholders and Board of Directors of Sempra Energy:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sempra Energy and subsidiaries (the “Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows, for each of the three years in the period ended December 31, 2018, and the related notes and the schedule listed in Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2019, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

We have served as the Company’s auditor since 1935.

SAN DIEGO GAS & ELECTRIC COMPANY

To the Shareholder and Board of Directors of San Diego Gas & Electric Company:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of San Diego Gas & Electric Company (the “Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows, for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2019, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

We have served as the Company’s auditor since 1935.

SOUTHERN CALIFORNIA GAS COMPANY

To the Shareholders and Board of Directors of Southern California Gas Company:

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Southern California Gas Company (the “Company”) as of December 31, 2018 and 2017, the related statements of operations, comprehensive income (loss), changes in shareholders’ equity, and cash flows, for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2019, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 26, 2019

We have served as the Company’s auditor since 1937.

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SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF OPERATIONS

(Dollars in millions, except per share amounts)

	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
REVENUES			
Utilities	\$ 10,046	\$ 9,776	\$ 9,261
Energy-related businesses	1,641	1,431	922
Total revenues	11,687	11,207	10,183
EXPENSES AND OTHER INCOME			
Utilities:			
Cost of electric fuel and purchased power	(2,323)	(2,281)	(2,188)
Cost of natural gas	(1,208)	(1,190)	(1,067)
Energy-related businesses:			
Cost of natural gas, electric fuel and purchased power	(355)	(339)	(277)
Other cost of sales	(78)	(24)	(322)
Operation and maintenance	(3,309)	(3,096)	(2,976)
Depreciation and amortization	(1,549)	(1,490)	(1,312)
Franchise fees and other taxes	(472)	(436)	(426)
Write-off of wildfire regulatory asset	—	(351)	—
Impairment losses	(1,122)	(72)	(153)
Gain on sale of assets	524	3	134
Remeasurement of equity method investment	—	—	617
Other income, net	72	233	138
Interest income	104	46	26
Interest expense	(925)	(659)	(553)
Income before income taxes and equity earnings of unconsolidated entities	1,046	1,551	1,824
Income tax expense	(96)	(1,276)	(389)
Equity earnings	176	76	84
Net income	1,126	351	1,519
Earnings attributable to noncontrolling interests	(76)	(94)	(148)
Mandatory convertible preferred stock dividends	(125)	—	—
Preferred dividends of subsidiary	(1)	(1)	(1)
Earnings attributable to common shares	\$ 924	\$ 256	\$ 1,370
Basic earnings per common share	\$ 3.45	\$ 1.02	\$ 5.48
Weighted-average shares outstanding, basic (thousands)	268,072	251,545	250,217
Diluted earnings per common share	\$ 3.42	\$ 1.01	\$ 5.46
Weighted-average shares outstanding, diluted (thousands)	269,852	252,300	251,155

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2, and a reclassification to conform to current year presentation, which we discuss in Note 1.

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	Sempra Energy shareholders' equity				
	Pretax amount	Income tax (expense) benefit	Net-of-tax amount	Noncontrolling interests (after tax)	Total
2018:					
Net income	\$ 1,146	\$ (96)	\$ 1,050	\$ 76	\$ 1,126
Other comprehensive income (loss):					
Foreign currency translation adjustments	(144)	—	(144)	(11)	(155)
Financial instruments	64	(21)	43	13	56
Pension and other postretirement benefits	(38)	4	(34)	—	(34)
Total other comprehensive (loss) income	(118)	(17)	(135)	2	(133)
Comprehensive income	1,028	(113)	915	78	993
Preferred dividends of subsidiary	(1)	—	(1)	—	(1)
Comprehensive income, after preferred dividends of subsidiary	\$ 1,027	\$ (113)	\$ 914	\$ 78	\$ 992
2017:					
Net income	\$ 1,533	\$ (1,276)	\$ 257	\$ 94	\$ 351
Other comprehensive income (loss):					
Foreign currency translation adjustments	107	—	107	8	115
Financial instruments	2	1	3	12	15
Pension and other postretirement benefits	20	(8)	12	—	12
Total other comprehensive income	129	(7)	122	20	142
Comprehensive income	1,662	(1,283)	379	114	493
Preferred dividends of subsidiary	(1)	—	(1)	—	(1)
Comprehensive income, after preferred dividends of subsidiary	\$ 1,661	\$ (1,283)	\$ 378	\$ 114	\$ 492
2016:					
Net income	\$ 1,760	\$ (389)	\$ 1,371	\$ 148	\$ 1,519
Other comprehensive income (loss):					
Foreign currency translation adjustments	42	—	42	(3)	39
Financial instruments	(6)	11	5	17	22
Pension and other postretirement benefits	(13)	4	(9)	—	(9)
Total other comprehensive income	23	15	38	14	52
Comprehensive income	1,783	(374)	1,409	162	1,571
Preferred dividends of subsidiary	(1)	—	(1)	—	(1)
Comprehensive income, after preferred dividends of subsidiary	\$ 1,782	\$ (374)	\$ 1,408	\$ 162	\$ 1,570

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 190	\$ 288
Restricted cash	35	62
Accounts receivable – trade, net	1,488	1,307
Accounts receivable – other, net	362	277
Due from unconsolidated affiliates	39	37
Income taxes receivable	68	110
Inventories	296	307
Regulatory assets	138	325
Greenhouse gas allowances	59	299
Assets held for sale	713	127
Other	257	202
Total current assets	3,645	3,341
Other assets:		
Restricted cash	21	14
Due from unconsolidated affiliates	688	598
Regulatory assets	1,589	1,517
Nuclear decommissioning trusts	974	1,033
Investment in Oncor Holdings	9,652	—
Other investments	2,337	2,527
Goodwill	2,373	2,397
Other intangible assets	272	596
Dedicated assets in support of certain benefit plans	416	455
Insurance receivable for Aliso Canyon costs	461	418
Deferred income taxes	151	170
Greenhouse gas allowances	289	93
Sundry	974	792
Total other assets	20,197	10,610
Property, plant and equipment:		
Property, plant and equipment	49,315	48,108
Less accumulated depreciation and amortization	(12,519)	(11,605)
Property, plant and equipment, net (\$295 and \$321 at December 31, 2018 and 2017, respectively, related to Otay Mesa VIE)	36,796	36,503
Total assets	\$ 60,638	\$ 50,454

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2018	December 31, 2017
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt	\$ 2,079	\$ 1,540
Accounts payable – trade	1,324	1,350
Accounts payable – other	150	173
Due to unconsolidated affiliates	10	7
Dividends and interest payable	499	342
Accrued compensation and benefits	469	439
Regulatory liabilities	105	109
Current portion of long-term debt (\$28 and \$10 at December 31, 2018 and 2017, respectively, related to Otay Mesa VIE)	1,673	1,427
Reserve for Aliso Canyon costs	160	84
Greenhouse gas obligations	59	299
Liabilities held for sale	25	49
Other	970	816
Total current liabilities	7,523	6,635
Long-term debt (\$190 and \$284 at December 31, 2018 and 2017, respectively, related to Otay Mesa VIE)	21,611	16,445
Deferred credits and other liabilities:		
Due to unconsolidated affiliates	37	35
Pension and other postretirement benefit plan obligations, net of plan assets	1,161	1,148
Deferred income taxes	2,571	2,767
Deferred investment tax credits	24	28
Regulatory liabilities	4,016	3,922
Asset retirement obligations	2,787	2,732
Greenhouse gas obligations	131	—
Deferred credits and other	1,529	1,602
Total deferred credits and other liabilities	12,256	12,234
Commitments and contingencies (Note 16)		
Equity:		
Preferred stock (50 million shares authorized):		
6% mandatory convertible preferred stock, series A (17.25 million shares issued and outstanding at December 31, 2018)	1,693	—
6.75% mandatory convertible preferred stock, series B (5.75 million shares issued and outstanding at December 31, 2018)	565	—
Common stock (750 million shares authorized; 274 million and 251 million shares outstanding at December 31, 2018 and 2017, respectively; no par value)	5,540	3,149
Retained earnings	10,104	10,147
Accumulated other comprehensive income (loss)	(764)	(626)
Total Sempra Energy shareholders' equity	17,138	12,670
Preferred stock of subsidiary	20	20
Other noncontrolling interests	2,090	2,450
Total equity	19,248	15,140
Total liabilities and equity	\$ 60,638	\$ 50,454

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 1,126	\$ 351	\$ 1,519
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,549	1,490	1,312
Deferred income taxes and investment tax credits	(182)	1,160	217
Write-off of wildfire regulatory asset	—	351	—
Impairment losses	1,122	72	153
Gain on sale of assets	(524)	(3)	(134)
Remeasurement of equity method investment	—	—	(617)
Equity earnings, net	(176)	(76)	(84)
Share-based compensation expense	83	82	52
Fixed-price contracts and other derivatives	(10)	7	21
Other	315	67	10
Net change in other working capital components	173	57	(59)
Insurance receivable for Aliso Canyon costs	(43)	188	(281)
Changes in other noncurrent assets and liabilities, net	14	(121)	202
Net cash provided by operating activities	<u>3,447</u>	<u>3,625</u>	<u>2,311</u>
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(3,784)	(3,949)	(4,214)
Expenditures for investments and acquisitions, net of cash, cash equivalents and restricted cash acquired	(10,376)	(270)	(1,504)
Proceeds from sale of assets, net of cash and restricted cash sold	1,593	17	763
Distributions from investments	10	26	25
Purchases of nuclear decommissioning trust assets	(890)	(1,314)	(1,034)
Proceeds from sales by nuclear decommissioning trust assets	890	1,314	1,134
Advances to unconsolidated affiliates	(102)	(531)	(25)
Repayments of advances to unconsolidated affiliates	71	9	11
Other	31	(2)	9
Net cash used in investing activities	<u>(12,557)</u>	<u>(4,700)</u>	<u>(4,835)</u>
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	(877)	(755)	(686)
Preferred dividends paid	(89)	—	—
Preferred dividends paid by subsidiary	(1)	(1)	(1)
Issuances of mandatory convertible preferred stock, net of \$42 in offering costs in 2018	2,258	—	—
Issuances of common stock, net of \$41 in offering costs in 2018	2,272	47	51
Repurchases of common stock	(21)	(15)	(56)
Issuances of debt (maturities greater than 90 days)	9,174	4,509	2,951
Payments on debt (maturities greater than 90 days)	(3,510)	(2,800)	(2,057)
(Decrease) increase in short-term debt, net	(124)	(36)	692
Advances from unconsolidated affiliates	—	35	—
Proceeds from sale of noncontrolling interests, net of \$1, \$3 and \$40 in offering costs, respectively	90	196	1,692
Net distributions to noncontrolling interests	(43)	(130)	(63)
Settlement of cross-currency swaps	(33)	—	—
Other	(90)	(43)	(21)
Net cash provided by financing activities	<u>9,006</u>	<u>1,007</u>	<u>2,502</u>
Effect of exchange rate changes on cash, cash equivalents and restricted cash	<u>(14)</u>	<u>7</u>	<u>(3)</u>
Decrease in cash, cash equivalents and restricted cash	(118)	(61)	(25)
Cash, cash equivalents and restricted cash, January 1	364	425	450
Cash, cash equivalents and restricted cash, December 31	<u>\$ 246</u>	<u>\$ 364</u>	<u>\$ 425</u>

See Notes to Consolidated Financial Statements

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
CHANGES IN OTHER WORKING CAPITAL COMPONENTS			
(Excluding cash, cash equivalents and restricted cash, and debt due within one year)			
Accounts receivable	\$ (144)	\$ 17	\$ (42)
Income taxes receivable, net	83	(70)	3
Inventories	23	(49)	(20)
Regulatory balancing accounts	263	108	198
Other current assets	(81)	(12)	(41)
Accounts payable	92	83	122
Reserve for Aliso Canyon costs	56	31	(221)
Other current liabilities	(119)	(51)	(58)
Net change in other working capital components	<u>\$ 173</u>	<u>\$ 57</u>	<u>\$ (59)</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$ 812	\$ 619	\$ 532
Income tax payments, net of refunds	174	172	160
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES			
Acquisitions:			
Assets acquired, net of cash, cash equivalents and restricted cash	\$ 9,921	\$ 436	\$ 3,808
Value of equity method investment immediately prior to acquisition	—	(28)	(1,144)
Liabilities assumed	(145)	(261)	(1,322)
Cash paid, net of cash, cash equivalents and restricted cash acquired	<u>\$ 9,776</u>	<u>\$ 147</u>	<u>\$ 1,342</u>
Accrued capital expenditures	\$ 459	\$ 562	\$ 626
Increase in capital lease obligations for investment in property, plant and equipment	558	504	—
Accrued Merger-related transaction costs	—	31	—
Equitization of note receivable due from unconsolidated affiliate	—	19	—
Preferred dividends declared but not paid	36	—	—
Common dividends issued in stock	54	53	53
Common dividends declared but not paid	245	207	189
Common dividends declared but not paid to noncontrolling interests	8	7	7

See Notes to Consolidated Financial Statements

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	Preferred stock	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	Sempra Energy shareholders' equity	Non-controlling interests	Total equity
Balance at December 31, 2015	\$ —	\$ 2,621	\$ 9,994	\$ (806)	\$ 11,809	\$ 770	\$ 12,579
Cumulative-effect adjustment from change in accounting principle			107		107		107
Net income			1,371		1,371	148	1,519
Other comprehensive income				38	38	14	52
Share-based compensation expense		52			52		52
Dividends declared:							
Common stock (\$3.02/share)			(754)		(754)		(754)
Preferred dividends of subsidiary			(1)		(1)		(1)
Issuances of common stock		104			104		104
Repurchases of common stock		(56)			(56)		(56)
Other noncontrolling interest activities:							
Equity contributions						3	3
Distributions						(65)	(65)
Sales, net of offering costs		261		20	281	1,420	1,701
Balance at December 31, 2016	—	2,982	10,717	(748)	12,951	2,290	15,241
Net income			257		257	94	351
Other comprehensive income				122	122	20	142
Share-based compensation expense		82			82		82
Dividends declared:							
Common stock (\$3.29/share)			(826)		(826)		(826)
Preferred dividends of subsidiary			(1)		(1)		(1)
Issuances of common stock		100			100		100
Repurchases of common stock		(15)			(15)		(15)
Other noncontrolling interest activities:							
Equity contributions						2	2
Distributions						(132)	(132)
Sales, net of offering costs						196	196
Balance at December 31, 2017	—	3,149	10,147	(626)	12,670	2,470	15,140
Cumulative-effect adjustments from change in accounting principles			2	(3)	(1)		(1)
Net income			1,050		1,050	76	1,126
Other comprehensive (loss) income				(135)	(135)	2	(133)
Share-based compensation expense		83			83		83
Dividends declared:							
Series A preferred stock (\$6.10/share)			(105)		(105)		(105)
Series B preferred stock (\$3.41/share)			(20)		(20)		(20)
Common stock (\$3.58/share)			(969)		(969)		(969)
Preferred dividends of subsidiary			(1)		(1)		(1)
Issuance of series A preferred stock	1,693				1,693		1,693
Issuance of series B preferred stock	565				565		565
Issuances of common stock		2,326			2,326		2,326
Repurchases of common stock		(21)			(21)		(21)
Other noncontrolling interest activities:							
Equity contributions						66	66
Distributions						(110)	(110)
Purchases		(1)			(1)	(7)	(8)
Sales, net of offering costs		4			4	86	90
Increase from acquisition						13	13
Decrease from divestiture						(486)	(486)
Balance at December 31, 2018	\$ 2,258	\$ 5,540	\$ 10,104	\$ (764)	\$ 17,138	\$ 2,110	\$ 19,248

See Notes to Consolidated Financial Statements.

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SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS

(Dollars in millions)

	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Operating revenues			
Electric	\$ 4,003	\$ 3,935	\$ 3,754
Natural gas	565	541	499
Total operating revenues	<u>4,568</u>	<u>4,476</u>	<u>4,253</u>
Operating expenses			
Cost of electric fuel and purchased power	1,370	1,293	1,187
Cost of natural gas	152	164	127
Operation and maintenance	1,058	1,024	1,062
Depreciation and amortization	688	670	646
Franchise fees and other taxes	290	265	255
Write-off of wildfire regulatory asset	—	351	—
Total operating expenses	<u>3,558</u>	<u>3,767</u>	<u>3,277</u>
Operating income	1,010	709	976
Other income, net	56	70	64
Interest income	4	—	—
Interest expense	(221)	(203)	(195)
Income before income taxes	849	576	845
Income tax expense	(173)	(155)	(280)
Net income	676	421	565
(Earnings) losses attributable to noncontrolling interest	(7)	(14)	5
Earnings attributable to common shares	<u>\$ 669</u>	<u>\$ 407</u>	<u>\$ 570</u>

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	SDG&E shareholder's equity				
	Pretax amount	Income tax (expense) benefit	Net-of-tax amount	Noncontrolling interest (after tax)	Total
2018:					
Net income	\$ 842	\$ (173)	\$ 669	\$ 7	\$ 676
Other comprehensive income (loss):					
Financial instruments	—	—	—	8	8
Pension and other postretirement benefits	(2)	—	(2)	—	(2)
Total other comprehensive (loss) income	(2)	—	(2)	8	6
Comprehensive income	\$ 840	\$ (173)	\$ 667	\$ 15	\$ 682
2017:					
Net income	\$ 562	\$ (155)	\$ 407	\$ 14	\$ 421
Other comprehensive income (loss):					
Financial instruments	—	—	—	11	11
Pension and other postretirement benefits	(1)	1	—	—	—
Total other comprehensive (loss) income	(1)	1	—	11	11
Comprehensive income	\$ 561	\$ (154)	\$ 407	\$ 25	\$ 432
2016:					
Net income (loss)	\$ 850	\$ (280)	\$ 570	\$ (5)	\$ 565
Other comprehensive income (loss):					
Financial instruments	—	—	—	10	10
Total other comprehensive income	—	—	—	10	10
Comprehensive income	\$ 850	\$ (280)	\$ 570	\$ 5	\$ 575

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 8	\$ 12
Restricted cash	11	6
Accounts receivable – trade, net	368	362
Accounts receivable – other, net	106	79
Inventories	102	105
Prepaid expenses	74	58
Regulatory assets	123	316
Fixed-price contracts and other derivatives	82	42
Greenhouse gas allowances	15	116
Other	5	4
Total current assets	894	1,100
Other assets:		
Restricted cash	18	11
Regulatory assets	454	451
Nuclear decommissioning trusts	974	1,033
Greenhouse gas allowances	155	83
Sundry	420	328
Total other assets	2,021	1,906
Property, plant and equipment:		
Property, plant and equipment	21,662	19,787
Less accumulated depreciation and amortization	(5,352)	(4,949)
Property, plant and equipment, net (\$295 and \$321 at December 31, 2018 and 2017, respectively, related to VIE)	16,310	14,838
Total assets	\$ 19,225	\$ 17,844

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2018	December 31, 2017
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt	\$ 291	\$ 253
Accounts payable	439	501
Due to unconsolidated affiliates	61	40
Accrued compensation and benefits	117	122
Accrued franchise fees	64	59
Regulatory liabilities	53	18
Current portion of long-term debt (\$28 and \$10 at December 31, 2018 and 2017, respectively, related to VIE)	81	220
Customer deposits	70	69
Greenhouse gas obligations	15	116
Asset retirement obligations	96	77
Other	141	147
Total current liabilities	1,428	1,622
Long-term debt (\$190 and \$284 at December 31, 2018 and 2017, respectively, related to the VIE)	6,138	5,335
Deferred credits and other liabilities:		
Pension and other postretirement benefit plan obligations, net of plan assets	212	182
Deferred income taxes	1,616	1,530
Deferred investment tax credits	16	18
Regulatory liabilities	2,404	2,225
Asset retirement obligations	778	762
Greenhouse gas obligations	30	—
Deferred credits and other	488	544
Total deferred credits and other liabilities	5,544	5,261
Commitments and contingencies (Note 16)		
Equity:		
Preferred stock (45 million shares authorized; none issued)	—	—
Common stock (255 million shares authorized; 117 million shares outstanding; no par value)	1,338	1,338
Retained earnings	4,687	4,268
Accumulated other comprehensive income (loss)	(10)	(8)
Total SDG&E shareholder's equity	6,015	5,598
Noncontrolling interest	100	28
Total equity	6,115	5,626
Total liabilities and equity	\$ 19,225	\$ 17,844

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 676	\$ 421	\$ 565
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	688	670	646
Deferred income taxes and investment tax credits	39	(10)	258
Write-off of wildfire regulatory asset	—	351	—
Fixed-price contracts and other derivatives	(3)	(2)	(3)
Other	(14)	(22)	(35)
Changes in other noncurrent assets and liabilities, net	9	(30)	(9)
Changes in working capital components:			
Accounts receivable	30	(76)	(31)
Due to/from affiliates, net	(2)	(10)	(19)
Inventories	3	(25)	(5)
Other current assets	(6)	9	25
Income taxes	23	136	(115)
Accounts payable	(1)	75	39
Regulatory balancing accounts	138	56	35
Other current liabilities	4	4	(28)
Net cash provided by operating activities	<u>1,584</u>	<u>1,547</u>	<u>1,323</u>
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(1,542)	(1,555)	(1,399)
Purchases of nuclear decommissioning trust assets	(890)	(1,314)	(1,034)
Proceeds from sales by nuclear decommissioning trusts	890	1,314	1,134
Decrease (increase) in loans to affiliate, net	—	31	(31)
Other	—	9	6
Net cash used in investing activities	<u>(1,542)</u>	<u>(1,515)</u>	<u>(1,324)</u>
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	(250)	(450)	(175)
Issuances of debt (maturities greater than 90 days)	618	398	498
Payments on debt (maturities greater than 90 days)	(492)	(186)	(204)
Increase (decrease) in short-term debt, net	38	253	(114)
Capital contributions (distributions) made to (by) VIE, net	57	(34)	(21)
Debt issuance costs	(5)	(4)	(6)
Net cash used in financing activities	<u>(34)</u>	<u>(23)</u>	<u>(22)</u>
Increase (decrease) in cash, cash equivalents and restricted cash	8	9	(23)
Cash, cash equivalents and restricted cash, January 1	29	20	43
Cash, cash equivalents and restricted cash, December 31	<u>\$ 37</u>	<u>\$ 29</u>	<u>\$ 20</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$ 214	\$ 195	\$ 187
Income tax payments, net	112	27	137
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES			
Accrued capital expenditures	\$ 159	\$ 217	\$ 227
Increase in capital lease obligations for investment in property, plant and equipment	550	500	—

See Notes to Consolidated Financial Statements

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	SDG&E shareholder's equity	Noncontrolling interest	Total equity
Balance at December 31, 2015	\$ 1,338	\$ 3,893	\$ (8)	\$ 5,223	\$ 53	\$ 5,276
Cumulative-effect adjustment from change in accounting principle		23		23		23
Net income (loss)		570		570	(5)	565
Other comprehensive income					10	10
Common stock dividends declared (\$1.50/share)		(175)		(175)		(175)
Noncontrolling interest activities:						
Equity contributions					2	2
Distributions					(23)	(23)
Balance at December 31, 2016	1,338	4,311	(8)	5,641	37	5,678
Net income		407		407	14	421
Other comprehensive income					11	11
Common stock dividends declared (\$3.86/share)		(450)		(450)		(450)
Noncontrolling interest activities:						
Equity contributions					1	1
Distributions					(35)	(35)
Balance at December 31, 2017	1,338	4,268	(8)	5,598	28	5,626
Net income		669		669	7	676
Other comprehensive (loss) income			(2)	(2)	8	6
Common stock dividends declared (\$2.14/share)		(250)		(250)		(250)
Noncontrolling interest activities:						
Equity contributions					65	65
Distributions					(8)	(8)
Balance at December 31, 2018	\$ 1,338	\$ 4,687	\$ (10)	\$ 6,015	\$ 100	\$ 6,115

See Notes to Consolidated Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF OPERATIONS

(Dollars in millions)

	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Operating revenues	\$ 3,962	\$ 3,785	\$ 3,471
Operating expenses			
Cost of natural gas	1,048	1,025	891
Operation and maintenance	1,613	1,474	1,391
Depreciation and amortization	556	515	476
Franchise fees and other taxes	154	144	140
Impairment losses	—	—	22
Total operating expenses	3,371	3,158	2,920
Operating income	591	627	551
Other income, net	15	31	38
Interest income	2	1	1
Interest expense	(115)	(102)	(97)
Income before income taxes	493	557	493
Income tax expense	(92)	(160)	(143)
Net income	401	397	350
Preferred dividend requirements	(1)	(1)	(1)
Earnings attributable to common shares	\$ 400	\$ 396	\$ 349

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	Pretax amount	Income tax (expense) benefit	Net-of-tax amount
2018:			
Net income	\$ 493	\$ (92)	\$ 401
Other comprehensive income (loss):			
Financial instruments	1	—	1
Total other comprehensive income	1	—	1
Comprehensive income	\$ 494	\$ (92)	\$ 402
2017:			
Net income	\$ 557	\$ (160)	\$ 397
Other comprehensive income (loss):			
Pension and other postretirement benefits	1	—	1
Total other comprehensive income	1	—	1
Comprehensive income	\$ 558	\$ (160)	\$ 398
2016:			
Net income	\$ 493	\$ (143)	\$ 350
Other comprehensive income (loss):			
Financial instruments	1	—	1
Pension and other postretirement benefits	(6)	2	(4)
Total other comprehensive loss	(5)	2	(3)
Comprehensive income	\$ 488	\$ (141)	\$ 347

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY**BALANCE SHEETS***(Dollars in millions)*

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 18	\$ 8
Accounts receivable – trade, net	634	517
Accounts receivable – other, net	97	90
Due from unconsolidated affiliates	7	4
Inventories	134	124
Regulatory assets	12	9
Greenhouse gas allowances	37	179
Other	31	48
Total current assets	<u>970</u>	<u>979</u>
Other assets:		
Regulatory assets	1,051	983
Insurance receivable for Aliso Canyon costs	461	418
Greenhouse gas allowances	116	9
Sundry	352	364
Total other assets	<u>1,980</u>	<u>1,774</u>
Property, plant and equipment:		
Property, plant and equipment	18,138	16,772
Less accumulated depreciation and amortization	<u>(5,699)</u>	<u>(5,366)</u>
Property, plant and equipment, net	<u>12,439</u>	<u>11,406</u>
Total assets	<u>\$ 15,389</u>	<u>\$ 14,159</u>

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2018	December 31, 2017
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	\$ 256	\$ 116
Accounts payable – trade	556	502
Accounts payable – other	93	93
Due to unconsolidated affiliates	34	35
Accrued compensation and benefits	159	151
Regulatory liabilities	52	91
Current portion of long-term debt	3	501
Customer deposits	101	89
Reserve for Aliso Canyon costs	160	84
Greenhouse gas obligations	37	179
Asset retirement obligations	90	68
Other	217	137
Total current liabilities	1,758	2,046
Long-term debt	3,427	2,485
Deferred credits and other liabilities:		
Pension obligation, net of plan assets	760	789
Deferred income taxes	1,177	995
Deferred investment tax credits	8	10
Regulatory liabilities	1,612	1,697
Asset retirement obligations	1,973	1,885
Greenhouse gas obligations	86	—
Deferred credits and other	330	345
Total deferred credits and other liabilities	5,946	5,721
Commitments and contingencies (Note 16)		
Shareholders' equity:		
Preferred stock (11 million shares authorized; 1 million shares outstanding)	22	22
Common stock (100 million shares authorized; 91 million shares outstanding; no par value)	866	866
Retained earnings	3,390	3,040
Accumulated other comprehensive income (loss)	(20)	(21)
Total shareholders' equity	4,258	3,907
Total liabilities and shareholders' equity	\$ 15,389	\$ 14,159

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 401	\$ 397	\$ 350
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	556	515	476
Deferred income taxes and investment tax credits	78	137	103
Impairment losses	—	—	22
Other	(7)	11	(26)
Insurance receivable for Aliso Canyon costs	(43)	188	(281)
Changes in other noncurrent assets and liabilities, net	(144)	(93)	42
Changes in working capital components:			
Accounts receivable	(87)	72	37
Inventories	(2)	(66)	4
Other current assets	11	—	(13)
Accounts payable	71	39	36
Income taxes	14	(5)	(2)
Due to/from affiliates, net	(10)	7	6
Regulatory balancing accounts	125	53	163
Reserve for Aliso Canyon costs	56	31	(221)
Other current liabilities	(6)	20	(25)
Net cash provided by operating activities	<u>1,013</u>	<u>1,306</u>	<u>671</u>
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(1,538)	(1,367)	(1,319)
Decrease in loans to affiliate, net	—	—	50
Other	7	4	—
Net cash used in investing activities	<u>(1,531)</u>	<u>(1,363)</u>	<u>(1,269)</u>
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	(50)	—	—
Preferred dividends paid	(1)	(1)	(1)
Issuances of long-term debt	949	—	499
Payments on long-term debt	(500)	—	(3)
Increase in short-term debt, net	140	54	62
Debt issuance costs	(10)	—	(5)
Net cash provided by financing activities	<u>528</u>	<u>53</u>	<u>552</u>
Increase (decrease) in cash and cash equivalents	10	(4)	(46)
Cash and cash equivalents, January 1	8	12	58
Cash and cash equivalents, December 31	<u>\$ 18</u>	<u>\$ 8</u>	<u>\$ 12</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$ 105	\$ 97	\$ 92
Income tax payments, net	—	28	41
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING ACTIVITY			
Accrued capital expenditures	\$ 191	\$ 208	\$ 207

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(Dollars in millions)

Years ended December 31, 2018, 2017 and 2016

	Preferred stock	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	Total shareholders' equity
Balance at December 31, 2015	\$ 22	\$ 866	\$ 2,280	\$ (19)	\$ 3,149
Cumulative-effect adjustment from change in accounting principle			15		15
Net income			350		350
Other comprehensive loss				(3)	(3)
Preferred stock dividends declared (\$1.50/share)			(1)		(1)
Balance at December 31, 2016	22	866	2,644	(22)	3,510
Net income			397		397
Other comprehensive income				1	1
Preferred stock dividends declared (\$1.50/share)			(1)		(1)
Balance at December 31, 2017	22	866	3,040	(21)	3,907
Net income			401		401
Other comprehensive income				1	1
Dividends declared:					
Preferred stock (\$1.50/share)			(1)		(1)
Common stock (\$0.55/share)			(50)		(50)
Balance at December 31, 2018	\$ 22	\$ 866	\$ 3,390	\$ (20)	\$ 4,258

See Notes to Financial Statements.

SEMPRA ENERGY AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1. SIGNIFICANT ACCOUNTING POLICIES AND OTHER FINANCIAL DATA

PRINCIPLES OF CONSOLIDATION

Sempra Energy

Sempra Energy's Consolidated Financial Statements include the accounts of Sempra Energy, a California-based Fortune 500 energy-services holding company, and its consolidated subsidiaries and VIEs. Sempra Global is the holding company for most of our subsidiaries that are not subject to California or Texas utility regulation. Sempra Energy's businesses are managed within seven separate reportable segments, which we discuss in Note 17. All references in these Notes to our reportable segments are not intended to refer to any legal entity with the same or similar name.

Our Sempra Mexico segment includes the operating companies of our subsidiary, IEnova, as well as certain holding companies and risk management activity. IEnova is a separate legal entity comprised of Sempra Energy's operations in Mexico. IEnova is included within our Sempra Mexico reportable segment, but is not the same in its entirety as the reportable segment. IEnova's financial results are reported in Mexico under International Financial Reporting Standards, as required by the Mexican Stock Exchange, where its shares are traded under the symbol IENOVA.

Sempra Energy uses the equity method to account for investments in companies over which we have the ability to exercise significant influence, but not control. We discuss our investments in unconsolidated entities in Notes 5, 6 and 12.

SDG&E

SDG&E's Consolidated Financial Statements include its accounts and the accounts of a VIE of which SDG&E is the primary beneficiary, as we discuss below in "Variable Interest Entities." SDG&E's common stock is wholly owned by Enova, which is a wholly owned subsidiary of Sempra Energy.

SoCalGas

SoCalGas' common stock is wholly owned by PE, which is a wholly owned subsidiary of Sempra Energy.

In this report, we refer to SDG&E and SoCalGas collectively as the California Utilities.

BASIS OF PRESENTATION

This is a combined report of Sempra Energy, SDG&E and SoCalGas. We provide separate information for SDG&E and SoCalGas as required. References in this report to "we," "our" and "Sempra Energy Consolidated" are to Sempra Energy and its consolidated entities, unless otherwise indicated by the context. We have eliminated intercompany accounts and transactions within the consolidated financial statements of each reporting entity.

Throughout this report, we refer to the following as Consolidated Financial Statements and Notes to Consolidated Financial Statements when discussed together or collectively:

- the Consolidated Financial Statements and related Notes of Sempra Energy and its subsidiaries and VIEs;
- the Consolidated Financial Statements and related Notes of SDG&E and its VIE; and
- the Financial Statements and related Notes of SoCalGas.

Reclassification on the Consolidated Statements of Operations

We have made a reclassification on the Consolidated Statements of Operations for the years ended December 31, 2017 and 2016 to conform to current year presentation. Line item captions for equity earnings (losses) before income tax and net of income tax have been combined into one line and presented after income tax expense (benefit). This reclassification is intended to treat the presentation of earnings from all equity method investees consistently and simplify the presentation on the statement of operations, while continuing to provide additional detail in the notes to the financial statements. We discuss our equity method investments further in Note 6. The following table summarizes the financial statement line items that were affected by this reclassification:

SEMPRA ENERGY – RECLASSIFICATION*(Dollars in millions)*

	Years ended December 31,			
	2017		2016	
	As previously presented	As currently presented	As previously presented	As currently presented
Consolidated Statements of Operations:				
Equity earnings, before income tax	\$ 34	\$ —	\$ 6	\$ —
Income before income taxes and equity earnings of certain unconsolidated subsidiaries	1,585	—	1,830	—
Income before income taxes and equity earnings of unconsolidated entities	—	1,551	—	1,824
Equity earnings, net of income tax	42	—	78	—
Equity earnings	—	76	—	84

Use of Estimates in the Preparation of the Financial Statements

We have prepared our Consolidated Financial Statements in conformity with U.S. GAAP. This requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes, including the disclosure of contingent assets and liabilities at the date of the financial statements. Although we believe the estimates and assumptions are reasonable, actual amounts ultimately may differ significantly from those estimates.

Subsequent Events

We evaluated events and transactions that occurred after December 31, 2018 through the date the financial statements were issued, and in the opinion of management, the accompanying statements reflect all adjustments and disclosures necessary for a fair presentation.

EFFECTS OF REGULATION

The California Utilities' accounting policies and financial statements reflect the application of U.S. GAAP provisions governing rate-regulated operations and the policies of the CPUC and the FERC. Under these provisions, a regulated utility records regulatory assets, which are generally costs that would otherwise be charged to expense, if it is probable that, through the ratemaking process, the utility will recover those assets from customers. To the extent that recovery is no longer probable, the related regulatory assets are written off. Regulatory liabilities generally represent amounts collected from customers in advance of the actual expenditure by the utility. If the actual expenditures are less than amounts previously collected from ratepayers, the excess would be refunded to customers, generally by reducing future rates. Regulatory liabilities may also arise from other transactions such as unrealized gains on fixed price contracts and other derivatives or certain deferred income tax benefits that are passed through to customers in future rates. In addition, the California Utilities record regulatory liabilities when the CPUC or the FERC requires a refund to be made to customers or has required that a gain or other transaction of net allowable costs be given to customers over future periods.

Determining probability of recovery of regulatory assets requires significant judgment by management and may include, but is not limited to, consideration of:

- the nature of the event giving rise to the assessment;
- existing statutes and regulatory code;
- legal precedents;
- regulatory principles and analogous regulatory actions;
- testimony presented in regulatory hearings;
- regulatory orders;
- a commission-authorized mechanism established for the accumulation of costs;
- status of applications for rehearings or state court appeals;
- specific approval from a commission; and
- historical experience.

Sempra Mexico's natural gas distribution utility, Ecogas, also applies U.S. GAAP for rate-regulated utilities to its operations, including the same evaluation of probability of recovery of regulatory assets described above.

We provide information concerning regulatory assets and liabilities in Note 4.

Our Sempra Texas Utility segment is comprised of our equity method investment in Oncor Holdings, which owns 80.25 percent of Oncor, as we discuss in Notes 5 and 6. Oncor is a regulated electric transmission and distribution utility in the State of Texas. Oncor's rates are regulated by the PUCT and certain cities and are subject to regulatory rate-setting processes and annual earnings oversight. Oncor prepares its financial statements in accordance with the provisions of U.S. GAAP governing rate-regulated operations.

Sempra South American Utilities has controlling interests in two electric distribution utilities in South America, Chilquinta Energía in Chile and Luz del Sur in Peru, and their subsidiaries. Revenues are based on tariffs that are set by government agencies in their respective countries based on an efficient model distribution company defined by those agencies. Because the tariffs are based on a model and are intended to cover the costs of the model company, but are not based on the costs of the specific utility and may not result in full cost recovery, these utilities do not meet the requirements necessary for, and therefore do not apply, regulatory accounting treatment under U.S. GAAP.

Certain business activities at IEnova are regulated by the CRE and meet the regulatory accounting requirements of U.S. GAAP. Pipeline projects currently under construction by IEnova that meet the regulatory accounting requirements of U.S. GAAP record the impact of AFUDC related to equity. We discuss AFUDC below in "Property, Plant and Equipment."

FAIR VALUE MEASUREMENTS

We measure certain assets and liabilities at fair value on a recurring basis, primarily nuclear decommissioning and benefit plan trust assets and derivatives. We also measure certain assets at fair value on a non-recurring basis in certain circumstances. These assets can include goodwill, intangible assets, equity method investments and other long-lived assets.

"Fair value" is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price).

A fair value measurement reflects the assumptions market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risk inherent in a particular valuation technique (such as a pricing model) and the risks inherent in the inputs to the model. Also, we consider an issuer's credit standing when measuring its liabilities at fair value.

We establish a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three levels of the fair value hierarchy are as follows:

Level 1 – Pricing inputs are unadjusted quoted prices available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. Our Level 1 financial instruments primarily consist of listed equities and U.S. government treasury securities, primarily in the NDT and benefit plan trusts, and exchange-traded derivatives.

Level 2 – Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date. Level 2 includes those financial instruments that are valued using models or other valuation methodologies. These models are primarily industry-standard models that consider various assumptions, including:

- quoted forward prices for commodities;
- time value;
- current market and contractual prices for the underlying instruments;
- volatility factors; and
- other relevant economic measures.

Substantially all of these assumptions are observable in the marketplace throughout the full term of the instrument, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace. Our financial instruments in this category include listed equities, domestic corporate bonds, municipal bonds and other foreign bonds, primarily in the NDT and benefit plan trusts, and non-exchange-traded derivatives such as interest rate instruments and over-the-counter forwards and options.

Level 3 – Pricing inputs include significant inputs that are generally less observable from objective sources. These inputs may be used with internally developed methodologies that result in management's best estimate of fair value from the perspective of a market participant. Our Level 3 financial instruments consist of CRRs and fixed-price electricity positions at SDG&E.

CASH AND CASH EQUIVALENTS

Cash equivalents are highly liquid investments with original maturities of three months or less at the date of purchase.

RESTRICTED CASH

Restricted cash at Sempra Energy was \$56 million and \$76 million at December 31, 2018 and 2017, respectively, and includes:

- for SDG&E, \$29 million and \$17 million at December 31, 2018 and 2017, respectively, representing funds held by a trustee for Otay Mesa VIE to pay certain operating costs;
- for Sempra Mexico, \$27 million and \$56 million at December 31, 2018 and 2017, respectively, primarily denominated in Mexican pesos, representing funds to pay for rights-of-way, license fees, permits, topographic surveys and other costs pursuant to trust and debt agreements related to pipeline projects;
- for Sempra Renewables, \$3 million at December 31, 2017, primarily representing funds held in accordance with debt agreements at our wholly owned solar project, which was sold along with certain other non-utility U.S. renewable assets in December 2018. We discuss the sale in Note 5; and
- for Sempra South American Utilities, negligible amounts at both December 31, 2018 and 2017.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported on the Consolidated Balance Sheets to the sum of such amounts reported on the Consolidated Statements of Cash Flows.

	At December 31,	
	2018	2017
RECONCILIATION OF CASH, CASH EQUIVALENTS AND RESTRICTED CASH		
<i>(Dollars in millions)</i>		
Sempra Energy Consolidated:		
Cash and cash equivalents	\$ 190	\$ 288
Restricted cash, current	35	62
Restricted cash, noncurrent	21	14
Total cash, cash equivalents and restricted cash on the Consolidated Statements of Cash Flows	\$ 246	\$ 364
SDG&E:		
Cash and cash equivalents	\$ 8	\$ 12
Restricted cash, current	11	6
Restricted cash, noncurrent	18	11
Total cash, cash equivalents and restricted cash on the Consolidated Statements of Cash Flows	\$ 37	\$ 29

COLLECTION ALLOWANCES

We record allowances for the collection of trade and other accounts and notes receivable, which include allowances for doubtful customer accounts and for other receivables. We show the changes in these allowances in the table below:

COLLECTION ALLOWANCES

(Dollars in millions)

	Years ended December 31,					
	2018		2017		2016	
Sempra Energy Consolidated:						
Allowances for collection of receivables at January 1	\$	33	\$	35	\$	32
Provisions for uncollectible accounts		14		16		23
Write-offs of uncollectible accounts		(17)		(18)		(20)
Allowances for collection of receivables at December 31	\$	30	\$	33	\$	35
SDG&E:						
Allowances for collection of receivables at January 1	\$	9	\$	8	\$	9
Provisions for uncollectible accounts		9		8		6
Write-offs of uncollectible accounts		(7)		(7)		(7)
Allowances for collection of receivables at December 31	\$	11	\$	9	\$	8
SoCalGas:						
Allowances for collection of receivables at January 1	\$	16	\$	21	\$	17
Provisions for uncollectible accounts		1		4		14
Write-offs of uncollectible accounts		(7)		(9)		(10)
Allowances for collection of receivables at December 31	\$	10	\$	16	\$	21

We evaluate accounts receivable collectability using a combination of factors, including past due status based on contractual terms, trends in write-offs, the age of the receivable, counterparty creditworthiness, economic conditions and specific events, such as bankruptcies. Adjustments to collection allowances are made when necessary based on the results of analysis, the aging of receivables, and historical and industry trends.

We write off accounts receivable in the period in which we deem the receivable to be uncollectible. We record recoveries of accounts receivable previously written off when it is known that they will be received.

INVENTORIES

The California Utilities value natural gas inventory using the LIFO method. As inventories are sold, differences between the LIFO valuation and the estimated replacement cost are reflected in customer rates. These differences are generally temporary, but may become permanent if the natural gas inventory withdrawn from storage during the year is not replaced by year end. The California Utilities generally value materials and supplies at the lower of average cost or net realizable value.

Sempra South American Utilities, Sempra Mexico, Sempra Renewables and Sempra LNG & Midstream value natural gas inventory and materials and supplies at the lower of average cost or net realizable value. Sempra Mexico and Sempra LNG & Midstream value LNG inventory using the first-in first-out method.

The components of inventories by segment are as follows:

INVENTORY BALANCES AT DECEMBER 31

(Dollars in millions)

	Natural gas		LNG		Materials and supplies		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
SDG&E	\$ —	\$ 4	\$ —	\$ —	\$ 102	\$ 101	\$ 102	\$ 105
SoCalGas	92	75	—	—	42	49	134	124
Sempra South American Utilities	—	—	—	—	38	30	38	30
Sempra Mexico	—	—	4	7	15	2	19	9
Sempra Renewables	—	—	—	—	—	5	—	5
Sempra LNG & Midstream	3	30	—	4	—	—	3	34
Sempra Energy Consolidated	\$ 95	\$ 109	\$ 4	\$ 11	\$ 197	\$ 187	\$ 296	\$ 307

INCOME TAXES

Income tax expense includes current and deferred income taxes. We record deferred income taxes for temporary differences between the book and the tax basis of assets and liabilities. ITCs from prior years are amortized to income by the California Utilities over the estimated service lives of the properties as required by the CPUC. At our other businesses, we reduce the book basis of the related asset by the amount of ITCs earned. At Sempra Renewables, PTCs have been recognized as income tax benefits as earned.

Under the regulatory accounting treatment required for flow-through temporary differences, the California Utilities and Sempra Mexico recognize:

- regulatory assets to offset deferred income tax liabilities if it is probable that the amounts will be recovered from customers; and
- regulatory liabilities to offset deferred income tax assets if it is probable that the amounts will be returned to customers.

When there are uncertainties related to potential income tax benefits, in order to qualify for recognition, the position we take has to have at least a more likely than not chance of being sustained (based on the position's technical merits) upon challenge by the respective authorities. The term "more likely than not" means a likelihood of more than 50 percent. Otherwise, we may not recognize any of the potential tax benefit associated with the position. We recognize a benefit for a tax position that meets the more likely than not criterion at the largest amount of tax benefit that is greater than 50 percent likely of being realized upon its effective resolution.

Unrecognized tax benefits involve management's judgment regarding the likelihood of the benefit being sustained. The final resolution of uncertain tax positions could result in adjustments to recorded amounts and may affect our ETR.

On December 22, 2017, the TCJA was signed into law. As a result, all cumulative undistributed earnings from non-U.S. subsidiaries were deemed repatriated and subjected to a one-time U.S. federal deemed repatriation tax. To the extent we intend to repatriate cash into the U.S., incremental U.S. state and non-U.S. withholding taxes are accrued. We currently do not record deferred income taxes for other basis differences between financial statement and income tax investment amounts in non-U.S. subsidiaries to the extent the related cumulative undistributed earnings are indefinitely reinvested. We recognize income tax expense for basis differences related to global intangible low-taxed income as a period cost if and when incurred.

We provide additional information about income taxes in Note 8.

GREENHOUSE GAS ALLOWANCES AND OBLIGATIONS

The California Utilities, Sempra Mexico and Sempra LNG & Midstream are required by California AB 32 to acquire GHG allowances for every metric ton of carbon dioxide equivalent emitted into the atmosphere during electric generation and natural gas transportation. At the California Utilities, many GHG allowances are allocated to us on behalf of our customers at no cost. We record purchased and allocated GHG allowances at the lower of weighted-average cost or market. We measure the compliance obligation, which is based on emissions, at the carrying value of allowances held plus the fair value of additional allowances necessary to satisfy the obligation. The California Utilities balance costs and revenues associated with the GHG program through regulatory balancing accounts. Sempra Mexico and Sempra LNG & Midstream record the cost of GHG obligations in cost of sales. We remove the assets and liabilities from the balance sheets as the allowances are surrendered.

RENEWABLE ENERGY CERTIFICATES

RECs are energy rights established by governmental agencies for the environmental and social promotion of renewable electricity generation. A REC, and its associated attributes and benefits, can be sold separately from the underlying physical electricity associated with a renewable-based generation source in certain markets.

Retail sellers of electricity obtain RECs through renewable energy PPAs, internal generation or separate purchases in the market to comply with the RPS established by the governmental agencies. RECs provide documentation for the generation of a unit of renewable energy that is used to verify compliance with the RPS. The cost of RECs at SDG&E, which is recoverable in rates, is recorded in Cost of Electric Fuel and Purchased Power on the Consolidated Statements of Operations.

PROPERTY, PLANT AND EQUIPMENT

PP&E primarily represents the buildings, equipment and other facilities used by the California Utilities to provide natural gas and electric utility services, and by the Sempra Global businesses in their operations, including construction work in progress at these segments. PP&E also includes lease improvements and other equipment at Parent and Other, as well as property acquired under a build-to-suit lease, which we discuss further in Note 16.

Our plant costs include:

- labor;
- materials and contract services; and
- expenditures for replacement parts incurred during a major maintenance outage of a plant.

In addition, the cost of utility plant at our rate-regulated businesses and PP&E under regulated projects that meet the regulatory accounting requirements of U.S. GAAP at Sempra Mexico includes AFUDC. We discuss AFUDC below. The cost of other PP&E includes capitalized interest.

Maintenance costs are expensed as incurred. The cost of most retired depreciable utility plant assets less salvage value is charged to accumulated depreciation.

We discuss assets collateralized as security for certain indebtedness in Note 7.

PROPERTY, PLANT AND EQUIPMENT BY MAJOR FUNCTIONAL CATEGORY
(Dollars in millions)

	PP&E at December 31,		Depreciation rates for years ended December 31,		
	2018	2017	2018	2017	2016
SDG&E:					
Natural gas operations	\$ 2,382	\$ 2,186	2.44%	2.40%	2.40%
Electric distribution	7,462	6,975	3.91	3.92	3.86
Electric transmission ⁽¹⁾	6,222	5,626	2.76	2.71	2.66
Electric generation ⁽²⁾	2,967	2,435	4.12	4.05	4.00
Other electric ⁽³⁾	1,408	1,114	6.43	5.54	5.66
Construction work in progress ⁽¹⁾	1,221	1,451	NA	NA	NA
Total SDG&E	21,662	19,787			
SoCalGas:					
Natural gas operations ⁽⁴⁾	17,268	15,759	3.60	3.63	3.64
Other non-utility	34	32	5.39	5.28	6.55
Construction work in progress	836	981	NA	NA	NA
Total SoCalGas	18,138	16,772			
Other operating units and parent⁽⁵⁾:					
Land and land rights	429	416	16 to 50 years ⁽⁶⁾	Weighted-average useful life 30	
Machinery and equipment:					
Utility electric distribution operations	1,977	1,751	10 to 45 years	41	
Generating plants	1,051	2,242	5 to 100 years	30	
LNG terminals	1,134	1,133	43 years	43	
Pipelines and storage	3,413	4,408	5 to 50 years	41	
Other	205	269	1 to 50 years	7	
Construction work in progress	684	691	NA	NA	
Other ⁽⁷⁾	622	639	3 to 80 years	31	
	9,515	11,549			
Total Sempra Energy Consolidated	\$ 49,315	\$ 48,108			

⁽¹⁾ At December 31, 2018, includes \$457 million in electric transmission assets and \$26 million in construction work in progress related to SDG&E's 92-percent interest in the Southwest Powerlink transmission line, jointly owned by SDG&E with other utilities. SDG&E, and each of the other owners, holds its undivided interest as a tenant in common in the property. Each owner is responsible for its share of the project and participates in decisions concerning operations and capital expenditures. SDG&E's share of operating expenses is included in Sempra Energy's and SDG&E's Consolidated Statements of Operations.

⁽²⁾ Includes capital lease assets of \$1.3 billion and \$757 million at December 31, 2018 and 2017, respectively.

⁽³⁾ Includes capital lease assets of \$13 million and \$22 million at December 31, 2018 and 2017, respectively.

⁽⁴⁾ Includes capital lease assets of \$40 million and \$34 million at December 31, 2018 and 2017, respectively.

⁽⁵⁾ Includes \$154 million and \$145 million at December 31, 2018 and 2017, respectively, of utility plant, primarily pipelines and other distribution assets at Ecogas.

⁽⁶⁾ Estimated useful lives are for land rights.

⁽⁷⁾ Includes capital lease assets of \$136 million and associated leasehold improvements of \$24 million at both December 31, 2018 and 2017 related to a build-to-suit lease.

Depreciation expense is computed using the straight-line method over the asset's estimated original composite useful life, the CPUC-prescribed period for the California Utilities, or the remaining term of the site leases, whichever is shortest.

DEPRECIATION EXPENSE
(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated	\$ 1,528	\$ 1,422	\$ 1,236
SDG&E	686	621	583
SoCalGas	553	514	474

ACCUMULATED DEPRECIATION*(Dollars in millions)*

	December 31,	
	2018	2017
SDG&E:		
Accumulated depreciation:		
Electric ⁽¹⁾	\$ 4,558	\$ 4,193
Natural gas	794	756
Total SDG&E	<u>5,352</u>	<u>4,949</u>
SoCalGas:		
Accumulated depreciation of natural gas utility plant in service ⁽²⁾	5,685	5,352
Accumulated depreciation – other non-utility	14	14
Total SoCalGas	<u>5,699</u>	<u>5,366</u>
Other operating units and parent and other:		
Accumulated depreciation – other ⁽³⁾	1,125	972
Accumulated depreciation of utility electric distribution operations	343	318
	<u>1,468</u>	<u>1,290</u>
Total Sempra Energy Consolidated	\$ 12,519	\$ 11,605

⁽¹⁾ Includes accumulated depreciation for capital lease assets of \$48 million and \$47 million at December 31, 2018 and 2017, respectively. Includes \$252 million at December 31, 2018 related to SDG&E's 92-percent interest in the Southwest Powerlink transmission line, jointly owned by SDG&E and other utilities.

⁽²⁾ Includes accumulated depreciation for capital lease assets of \$37 million and \$33 million at December 31, 2018 and 2017, respectively.

⁽³⁾ Includes accumulated depreciation for capital lease assets of \$10 million and \$7 million and for associated leasehold improvements of \$3 million and \$2 million at December 31, 2018 and 2017, respectively, related to a build-to-suit lease. Includes \$43 million and \$39 million at December 31, 2018 and 2017, respectively, of accumulated depreciation for utility plant at Ecogas.

The California Utilities finance their construction projects with debt and equity funds. The CPUC and the FERC allow the recovery of the cost of these funds by the capitalization of AFUDC, calculated using rates authorized by the CPUC and the FERC, as a cost component of PP&E. The California Utilities earn a return on the capitalized AFUDC after the utility property is placed in service and recover the AFUDC from their customers over the expected useful lives of the assets.

Pipeline projects currently under construction by Sempra Mexico that are both subject to certain regulation and meet U.S. GAAP regulatory accounting requirements record the impact of AFUDC.

We capitalize interest costs incurred to finance capital projects. We also capitalize interest on equity method investments that have not commenced planned principal operations.

Interest capitalized and AFUDC are as follows:

CAPITALIZED FINANCING COSTS*(Dollars in millions)*

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated	\$ 202	\$ 256	\$ 236
SDG&E	82	85	62
SoCalGas	48	60	55

GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

Goodwill is the excess of the purchase price over the fair value of the identifiable net assets of acquired companies measured at the time of acquisition. Goodwill is not amortized, but we test it for impairment annually on October 1 or whenever events or changes in circumstances necessitate an evaluation. If the carrying value of the reporting unit, including goodwill, exceeds its fair value, and the book value of goodwill is greater than its fair value on the test date, we record a goodwill impairment loss.

For our annual goodwill impairment testing, under current U.S. GAAP guidance we have the option to first make a qualitative assessment of whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount before applying the two-step, quantitative goodwill impairment test. If we elect to perform the qualitative assessment, we evaluate relevant events and circumstances, including but not limited to, macroeconomic conditions, industry and market considerations, cost factors, changes in key personnel and the overall financial performance of the reporting unit. If, after assessing these qualitative factors, we determine that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, then we perform the two-step goodwill impairment test. When we perform the two-step, quantitative goodwill impairment test, we exercise judgment to develop estimates of the fair value of the reporting unit and the corresponding goodwill. Our fair value estimates are developed from the perspective of a knowledgeable market participant. We consider observable transactions in the marketplace for similar investments, if available, as well as an income-based approach such as discounted cash flow analysis. A discounted cash flow analysis may be based directly on anticipated future revenues and expenses and may be performed based on free cash flows generated within the reporting unit. Critical assumptions that affect our estimates of fair value may include:

- consideration of market transactions;
- future cash flows;
- the appropriate risk-adjusted discount rate;
- country risk; and
- entity risk.

Changes in the carrying amount of goodwill on the Sempra Energy Consolidated Balance Sheets are as follows:

GOODWILL			
<i>(Dollars in millions)</i>			
	Sempra South American Utilities	Sempra Mexico	Total
Balance at December 31, 2016	\$ 749	\$ 1,615	\$ 2,364
Acquisition of business – measurement period adjustment	—	(13)	(13)
Foreign currency translation ⁽¹⁾	46	—	46
Balance at December 31, 2017	795	1,602	2,397
Acquisition of business	38	—	38
Foreign currency translation ⁽¹⁾	(62)	—	(62)
Balance at December 31, 2018	\$ 771	\$ 1,602	\$ 2,373

⁽¹⁾ We record the offset of this fluctuation to OCI.

As we discuss in Note 5, Sempra South American Utilities recorded goodwill of \$38 million in connection with its acquisition of CTNG in 2018. In 2017, Sempra Mexico recorded a reduction to goodwill of \$13 million for a measurement period adjustment in connection with its acquisition of Ventika.

Other Intangible Assets

Other Intangible Assets included on the Sempra Energy Consolidated Balance Sheets are as follows:

OTHER INTANGIBLE ASSETS (Dollars in millions)	Amortization period (years)	December 31,	
		2018	2017
Development rights	50	\$ —	\$ 322
Renewable energy transmission and consumption permit	19	154	154
Storage rights	46	—	138
O&M agreement	23	66	66
Concession permits	Indefinite	50	—
Other	10 years to indefinite	28	18
		<u>298</u>	<u>698</u>
Less accumulated amortization:			
Development rights		—	(60)
Renewable energy transmission and consumption permit		(16)	(8)
Storage rights		—	(28)
O&M agreement		(3)	—
Other		(7)	(6)
		<u>(26)</u>	<u>(102)</u>
		<u>\$ 272</u>	<u>\$ 596</u>

Other Intangible Assets at December 31, 2018 primarily includes:

- a renewable energy transmission and consumption permit previously granted by the CRE that was acquired in connection with the acquisition of the Ventika wind power generation facilities;
- a favorable O&M agreement acquired in connection with the acquisition of DEN, which we discuss in Note 5; and
- in connection with the CTNG acquisition that we disclose in Note 5, concession permits allowing CTNG to operate transmission lines and substation assets into perpetuity.

In 2018, we recognized an impairment of \$369 million for the net carrying value of Other Intangible Assets at Sempra LNG & Midstream, representing development and storage rights related to the natural gas storage facilities of Mississippi Hub and Bay Gas. This impairment is included in Sempra LNG & Midstream's total net impairment of \$1.1 billion, which is recorded in Impairment Losses on Sempra Energy's Consolidated Statements of Operations, as we discuss in Notes 5 and 12.

Also in 2018, Other Intangible Assets increased due to Sempra Mexico's acquisition of self-supply permits for development projects. These self-supply permits allow generators to compete directly with the CFE's retail tariffs and, thus, have access to PPAs with a competitive pricing position. The useful life of a self-supply permit is based on the life of the interconnection agreement with the CFE. Amortization of self-supply permits begins when the project has commenced planned principal operations.

Intangible assets subject to amortization are amortized over their estimated useful lives. Amortization expense for intangible assets in 2018, 2017 and 2016 was \$16 million, \$18 million and \$11 million, respectively. We estimate the amortization expense for the next five years to be \$12 million per year.

LONG-LIVED ASSETS

We test long-lived assets for recoverability whenever events or changes in circumstances have occurred that may affect the recoverability or the estimated useful lives of long-lived assets. Long-lived assets include intangible assets subject to amortization, but do not include investments in unconsolidated entities. Events or changes in circumstances that indicate that the carrying amount of a long-lived asset may not be recoverable may include:

- significant decreases in the market price of an asset;
- a significant adverse change in the extent or manner in which we use an asset or in its physical condition;
- a significant adverse change in legal or regulatory factors or in the business climate that could affect the value of an asset;
- a current period operating or cash flow loss combined with a history of operating or cash flow losses or a projection of continuing losses associated with the use of a long-lived asset; and

- a current expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life.

A long-lived asset may be impaired when the estimated future undiscounted cash flows are less than the carrying amount of the asset. If that comparison indicates that the asset's carrying value may not be recoverable, the impairment is measured based on the difference between the carrying amount and the fair value of the asset. This evaluation is performed at the lowest level for which separately identifiable cash flows exist.

VARIABLE INTEREST ENTITIES

We consolidate a VIE if we are the primary beneficiary of the VIE. Our determination of whether we are the primary beneficiary is based upon qualitative and quantitative analyses, which assess:

- the purpose and design of the VIE;
- the nature of the VIE's risks and the risks we absorb;
- the power to direct activities that most significantly impact the economic performance of the VIE; and
- the obligation to absorb losses or the right to receive benefits that could be significant to the VIE.

We will continue to evaluate our VIEs for any changes that may impact our determination of the primary beneficiary.

SDG&E

SDG&E's power procurement is subject to reliability requirements that may require SDG&E to enter into various PPAs that include variable interests. SDG&E evaluates the respective entities to determine if variable interests exist and, based on the qualitative and quantitative analyses described above, if SDG&E, and thereby Sempra Energy, is the primary beneficiary.

Tolling Agreements

SDG&E has agreements under which it purchases power generated by facilities for which it supplies all of the natural gas to fuel the power plant (i.e., tolling agreements). SDG&E's obligation to absorb natural gas costs may be a significant variable interest. In addition, SDG&E has the power to direct the dispatch of electricity generated by these facilities. Based on our analysis, the ability to direct the dispatch of electricity may have the most significant impact on the economic performance of the entity owning the generating facility because of the associated exposure to the cost of natural gas, which fuels the plants, and the value of electricity produced. To the extent that SDG&E (1) is obligated to purchase and provide fuel to operate the facility, (2) has the power to direct the dispatch, and (3) purchases all of the output from the facility for a substantial portion of the facility's useful life, SDG&E may be the primary beneficiary of the entity owning the generating facility. SDG&E determines if it is the primary beneficiary in these cases based on a qualitative approach in which we consider the operational characteristics of the facility, including its expected power generation output relative to its capacity to generate and the financial structure of the entity, among other factors. If we determine that SDG&E is the primary beneficiary, SDG&E and Sempra Energy consolidate the entity that owns the facility as a VIE.

Otay Mesa VIE

SDG&E has a tolling agreement to purchase power generated at OMEC, a 605-MW generating facility. A related agreement provided SDG&E with the option to purchase OMEC at a predetermined price (referred to as the call option). SDG&E's call option has since expired unexercised. Under the terms of the agreement, on or before April 1, 2019, OMEC LLC can require SDG&E to purchase the power plant on or before October 3, 2019 for \$280 million, subject to adjustments (referred to as the put option), or upon earlier termination of the PPA.

The facility owner, OMEC LLC, is a VIE, which we refer to as Otay Mesa VIE, of which SDG&E is the primary beneficiary. SDG&E has no OMEC LLC voting rights, holds no equity in OMEC LLC and does not operate OMEC. In addition to the risks absorbed under the tolling agreement, SDG&E absorbs separately through the put option a significant portion of the risk that the value of Otay Mesa VIE could decline. Accordingly, SDG&E and Sempra Energy consolidate Otay Mesa VIE. Otay Mesa VIE's equity of \$100 million at December 31, 2018 and \$28 million at December 31, 2017 is included on the Consolidated Balance Sheets in Other Noncontrolling Interests for Sempra Energy and in Noncontrolling Interest for SDG&E.

In October 2018, SDG&E and OMEC LLC signed a resource adequacy capacity agreement for a term that would commence at the expiration of the current tolling agreement in October 2019 and end in August 2024. The capacity agreement was approved by OMEC LLC's lenders in December 2018, but is contingent upon receiving final and non-appealable approval from the CPUC before the expiration of the put option on April 1, 2019. If a timely and non-appealable approval of the resource adequacy

capacity agreement is received, OMEC LLC will waive its right to exercise the put option and, as a result, SDG&E would no longer consolidate Otay Mesa VIE. SDG&E received CPUC approval of the resource adequacy capacity agreement in February 2019 and the period for appeal expires on March 25, 2019.

OMEC LLC has a loan outstanding of \$220 million at December 31, 2018, which we describe in Note 7. SDG&E is not a party to the loan agreement and does not have any additional implicit or explicit financial responsibility to OMEC LLC, nor would SDG&E be required to assume OMEC LLC's loan under the put option purchase scenario.

The Consolidated Financial Statements of Sempra Energy and SDG&E include the following amounts associated with Otay Mesa VIE. The amounts are net of eliminations of transactions between SDG&E and Otay Mesa VIE. The captions in the tables below correspond to SDG&E's Consolidated Balance Sheets and Consolidated Statements of Operations.

AMOUNTS ASSOCIATED WITH OTAY MESA VIE

(Dollars in millions)

	December 31,	
	2018	2017
Cash and cash equivalents	\$ —	\$ 4
Restricted cash	11	6
Inventories	4	4
Other	2	1
Total current assets	17	15
Restricted cash	18	11
Property, plant and equipment, net	295	321
Total assets	\$ 330	\$ 347
Current portion of long-term debt	\$ 28	\$ 10
Fixed-price contracts and other derivatives	1	10
Other	3	5
Total current liabilities	32	25
Long-term debt	190	284
Fixed-price contracts and other derivatives	—	3
Deferred credits and other	8	7
Noncontrolling interest	100	28
Total liabilities and equity	\$ 330	\$ 347

	Years ended December 31,		
	2018	2017	2016
Operating expenses			
Cost of electric fuel and purchased power	\$ (75)	\$ (79)	\$ (79)
Operation and maintenance	17	17	29
Depreciation and amortization	30	28	35
Total operating expenses	(28)	(34)	(15)
Operating income	28	34	15
Other income	2	2	—
Interest expense	(23)	(22)	(20)
Income (loss) before income taxes/Net income (loss)	7	14	(5)
(Earnings) losses attributable to noncontrolling interest	(7)	(14)	5
Earnings attributable to common shares	\$ —	\$ —	\$ —

SDG&E has determined that no contracts, other than the one relating to Otay Mesa VIE mentioned above, resulted in SDG&E being the primary beneficiary of a VIE at December 31, 2018. In addition to the tolling agreements described above, other variable interests involve various elements of fuel and power costs, and other components of cash flows expected to be paid to or received by our counterparties. In most of these cases, the expectation of variability is not substantial, and SDG&E generally does not have the power to direct activities that most significantly impact the economic performance of the other VIEs. In addition, SDG&E is not exposed to losses or gains as a result of these other VIEs, because all such variability would be recovered in rates. If our ongoing evaluation of these VIEs were to conclude that SDG&E becomes the primary beneficiary and consolidation by SDG&E becomes necessary, the effects could be significant to the financial position and liquidity of SDG&E and Sempra Energy. We provide additional information about PPAs with power plant facilities that are VIEs of which SDG&E is not the primary beneficiary in Note 16.

Sempra Texas Utility

On March 9, 2018, we completed the acquisition of an indirect, 100-percent interest in Oncor Holdings, a VIE that owns an 80.25-percent interest in Oncor. Sempra Energy is not the primary beneficiary of the VIE because of the structural and operational ring-fencing measures in place that prevent us from having the power to direct the significant activities of Oncor Holdings. As a result, we do not consolidate Oncor Holdings and instead account for our ownership interest as an equity method investment. See Notes 5 and 6 for additional information about our equity method investment in Oncor Holdings and restrictions in our ability to influence its activities. Our current maximum exposure to loss from our interest in Oncor Holdings did not exceed the carrying value of our investment, which was \$9,652 million at December 31, 2018. Our maximum exposure will fluctuate over time, including as a result of our commitment to contribute approximately \$1,025 million in capital (excluding Sempra Energy's share of approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition) to partially fund Oncor's acquisition of interests in InfraREIT, which we discuss in Note 5.

Sempra Renewables

Certain of Sempra Renewables' wind (and previously solar) power generation projects are held by limited liability companies whose members are Sempra Renewables and financial institutions. The financial institutions are noncontrolling tax equity investors to which earnings, tax attributes and cash flows are allocated in accordance with the respective limited liability company agreements. These entities are VIEs and Sempra Energy is the primary beneficiary, generally due to Sempra Energy's power as the operator of the renewable energy projects to direct the activities that most significantly impact the economic performance of these VIEs. As the primary beneficiary of these tax equity limited liability companies, we consolidate them. In December 2018, \$1.1 billion of property, plant and equipment, net, plus other assets and liabilities associated with these entities, was included in the sale of solar assets to a subsidiary of Con Ed, as we discuss in Note 5.

The Consolidated Financial Statements of Sempra Energy include the following amounts associated with these entities.

AMOUNTS ASSOCIATED WITH TAX EQUITY ARRANGEMENTS

(Dollars in millions)

	December 31,	
	2018	2017
Cash and cash equivalents	\$ 7	\$ 23
Accounts receivable – trade, net	2	5
Inventories	—	1
Other	1	1
Total current assets	10	30
Sundry	—	2
Property, plant and equipment, net	286	1,412
Total assets	296	1,444
Accounts payable	2	42
Other	1	1
Total current liabilities	3	43
Asset retirement obligations	6	40
Deferred income taxes	7	10
Deferred credits and other	—	1
Total liabilities	16	94
Other noncontrolling interests	158	631
Net assets less other noncontrolling interests	\$ 122	\$ 719

	Years ended December 31,		
	2018	2017	2016
REVENUES			
Energy-related businesses	\$ 92	\$ 61	\$ 2
EXPENSES			
Operation and maintenance	(16)	(9)	(1)
Depreciation and amortization	(47)	(32)	—
Income before income taxes	29	20	1
Income tax expense	(18)	(4)	—
Net income	11	16	1
Losses attributable to noncontrolling interests ⁽¹⁾	58	23	4
Earnings	\$ 69	\$ 39	\$ 5

⁽¹⁾ Net income or loss attributable to NCI is computed using the HLBV method and is not based on ownership percentages.

Sempra LNG & Midstream

Cameron LNG JV is a VIE principally due to contractual provisions that transfer certain risks to customers. Sempra Energy is not the primary beneficiary of the VIE because we do not have the power to direct the most significant activities of Cameron LNG JV, and therefore we account for our investment under the equity method. The carrying value of our investment in Cameron LNG JV, including amounts recognized in AOCI related to interest-rate cash flow hedges at Cameron LNG JV, was \$1,271 million at December 31, 2018 and \$997 million at December 31, 2017. Our current maximum exposure to loss, which fluctuates over time, includes the carrying value of our investment and guarantees that we discuss in Note 6.

Other Variable Interest Entities

Sempra Energy's other businesses also enter into arrangements that could include variable interests. We evaluate these arrangements and applicable entities based on the qualitative and quantitative analyses described above. Certain of these entities are service or project companies that are VIEs because the total equity at risk is not sufficient for the entities to finance their activities without additional subordinated financial support. As the primary beneficiary of these companies, we consolidate them. At December 31, 2018, the assets of these VIEs totaled approximately \$286 million and consisted primarily of property, plant and equipment and other long-term assets. Sempra Energy's exposure to loss is equal to the carrying value of these assets. In all other cases, we have determined that these arrangements are not variable interests in a VIE and therefore are not subject to the U.S. GAAP requirements concerning the consolidation or disclosures of VIEs.

ASSET RETIREMENT OBLIGATIONS

For tangible long-lived assets, we record AROs for the present value of liabilities of future costs expected to be incurred when assets are retired from service, if the retirement process is legally required and if a reasonable estimate of fair value can be made. We also record a liability if a legal obligation to perform an asset retirement exists and can be reasonably estimated, but performance is conditional upon a future event. We record the estimated retirement cost over the life of the related asset by depreciating the asset retirement cost (measured as the present value of the obligation at the time the asset is placed into service), and accreting the obligation until the liability is settled. Our rate-regulated entities, including the California Utilities, record regulatory assets or liabilities as a result of the timing difference between the recognition of costs in accordance with U.S. GAAP and costs recovered through the rate-making process.

We have recorded AROs related to various assets, including:

SDG&E and SoCalGas

- fuel and storage tanks
- natural gas transmission and distribution systems
- hazardous waste storage facilities
- asbestos-containing construction materials

SDG&E

- nuclear power facilities
- electric transmission and distribution systems
- energy storage systems
- power generation plants

SoCalGas

- underground natural gas storage facilities and wells

All Other Sempra Energy Businesses

- electric transmission and distribution systems
- natural gas transportation and distribution systems
- power generation plants
- LNG terminal
- LPG terminal
- underground natural gas storage facilities (classified as held for sale at December 31, 2018)

The changes in ARO are as follows:

CHANGES IN ASSET RETIREMENT OBLIGATIONS

(Dollars in millions)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	2018	2017	2018	2017	2018	2017
Balance as of January 1 ⁽¹⁾	\$ 2,877	\$ 2,553	\$ 839	\$ 830	\$ 1,953	\$ 1,659
Accretion expense	121	109	39	39	78	66
Liabilities incurred	7	34	—	17	—	—
Deconsolidation and reclassification ⁽²⁾	(61)	—	—	—	—	—
Payments	(42)	(63)	(39)	(61)	(3)	(2)
Revisions ⁽³⁾	71	244	35	14	35	230
Balance at December 31 ⁽¹⁾	\$ 2,973	\$ 2,877	\$ 874	\$ 839	\$ 2,063	\$ 1,953

⁽¹⁾ Current portion of the ARO for Sempra Energy Consolidated is included in Other Current Liabilities on the Consolidated Balance Sheets.

⁽²⁾ In 2018, we reclassified \$6 million at Sempra Renewables and \$8 million at Sempra LNG & Midstream to Liabilities Held for Sale, and \$5 million related to TdM from Liabilities Held for Sale, and deconsolidated \$52 million at Sempra Renewables, as we discuss in Note 5.

⁽³⁾ In 2017, revised estimates were primarily related to underground natural gas storage facilities and wells at SoCalGas.

CONTINGENCIES

We accrue losses for the estimated impacts of various conditions, situations or circumstances involving uncertain outcomes. For loss contingencies, we accrue the loss if an event has occurred on or before the balance sheet date and:

- information available through the date we file our financial statements indicates it is probable that a loss has been incurred, given the likelihood of uncertain future events; and
- the amount of the loss can be reasonably estimated.

We do not accrue contingencies that might result in gains. We continuously assess contingencies for litigation claims, environmental remediation and other events.

LEGAL FEES

Legal fees that are associated with a past event for which a liability has been recorded are accrued when it is probable that fees also will be incurred and amounts are estimable.

COMPREHENSIVE INCOME

Comprehensive income includes all changes in the equity of a business enterprise (except those resulting from investments by owners and distributions to owners), including:

- foreign currency translation adjustments;
- certain hedging activities;
- changes in unamortized net actuarial gain or loss and prior service cost related to pension and other postretirement benefits plans; and
- unrealized gains or losses on available-for-sale securities.

The Consolidated Statements of Comprehensive Income (Loss) show the changes in the components of OCI, including the amounts attributable to NCI. The following tables present the changes in AOCI by component and amounts reclassified out of AOCI to net income, excluding amounts attributable to NCI:

CHANGES IN ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS) BY COMPONENT⁽¹⁾
(Dollars in millions)

	Foreign currency translation adjustments	Financial instruments	Pension and other postretirement benefits	Total accumulated other comprehensive income (loss)
Sempra Energy Consolidated:				
Balance as of December 31, 2015	\$ (582)	\$ (137)	\$ (87)	\$ (806)
OCI before reclassifications	42	(7)	(15)	20
Amounts reclassified from AOCI ⁽²⁾	13	19	6	38
Net OCI	55	12	(9)	58
Balance as of December 31, 2016	(527)	(125)	(96)	(748)
OCI before reclassifications	107	(4)	—	103
Amounts reclassified from AOCI	—	7	12	19
Net OCI	107	3	12	122
Balance as of December 31, 2017	(420)	(122)	(84)	(626)
Cumulative-effect adjustment from change in accounting principle ⁽³⁾	—	(3)	—	(3)
OCI before reclassifications	(144)	40	(52)	(156)
Amounts reclassified from AOCI	—	3	18	21
Net OCI	(144)	43	(34)	(135)
Balance as of December 31, 2018	\$ (564)	\$ (82)	\$ (118)	\$ (764)
SDG&E:				
Balance as of December 31, 2015			\$ (8)	(8)
OCI before reclassifications			(1)	(1)
Amounts reclassified from AOCI			1	1
Net OCI			—	—
Balance as of December 31, 2016			(8)	(8)
OCI before reclassifications			(1)	(1)
Amounts reclassified from AOCI			1	1
Net OCI			—	—
Balance as of December 31, 2017			(8)	(8)
OCI before reclassifications			(6)	(6)
Amounts reclassified from AOCI			4	4
Net OCI			(2)	(2)
Balance as of December 31, 2018			\$ (10)	(10)
SoCalGas:				
Balance as of December 31, 2015	\$ (14)	\$ (5)	\$ (5)	(19)
OCI before reclassifications	—	—	(4)	(4)
Amounts reclassified from AOCI	1	—	—	1
Net OCI	1	—	(4)	(3)
Balance as of December 31, 2016	(13)	(9)	(9)	(22)
Amounts reclassified from AOCI	—	—	1	1
Net OCI	—	—	1	1
Balance as of December 31, 2017	(13)	(8)	(8)	(21)
OCI before reclassifications	—	—	(1)	(1)
Amounts reclassified from AOCI	1	—	1	2
Net OCI	1	—	—	1
Balance as of December 31, 2018	\$ (12)	\$ (8)	\$ (8)	(20)

⁽¹⁾ All amounts are net of income tax, if subject to tax, and exclude NCI.

⁽²⁾ Total AOCI includes \$20 million associated with the October 2016 sale of NCI, discussed below in "Sale of Noncontrolling Interests – Sempra Mexico – Follow-On Offerings," which does not impact the Consolidated Statement of Comprehensive Income.

⁽³⁾ Represents impact from adoption of ASU 2017-12, which we discuss in Note 2.

RECLASSIFICATIONS OUT OF ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)
(Dollars in millions)

Details about accumulated other comprehensive income (loss) components	Amounts reclassified from accumulated other comprehensive income (loss)			Affected line item on Consolidated Statements of Operations
	Years ended December 31,			
	2018	2017	2016	
Sempra Energy Consolidated:				
Financial instruments:				
Interest rate and foreign exchange instruments ⁽¹⁾	\$ —	\$ (4)	\$ 17	Interest Expense
	(2)	—	—	Other Income, Net
Interest rate instruments	9	—	—	Gain on Sale of Assets
Interest rate and foreign exchange instruments	7	20	15	Equity Earnings
Interest rate and foreign exchange instruments	—	—	7	Remeasurement of Equity Method Investment
Foreign exchange instruments	(1)	(2)	—	Revenues: Energy-Related Businesses
Commodity contracts not subject to rate recovery	—	9	(6)	Revenues: Energy-Related Businesses
Total before income tax	13	23	33	
	(4)	(6)	(6)	Income Tax Expense
Net of income tax	9	17	27	
	(6)	(10)	(15)	Earnings Attributable to Noncontrolling Interests
	<u>\$ 3</u>	<u>\$ 7</u>	<u>\$ 12</u>	
Pension and other postretirement benefits:				
Amortization of actuarial loss ⁽²⁾	\$ 12	\$ 10	\$ 10	Other Income, Net
Amortization of prior service cost ⁽²⁾	2	1	1	Other Income, Net
Settlements ⁽²⁾	12	8	—	Other Income, Net
Total before income tax	26	19	11	
	(8)	(7)	(5)	Income Tax Expense
Net of income tax	<u>\$ 18</u>	<u>\$ 12</u>	<u>\$ 6</u>	
Total reclassifications for the period, net of tax	\$ 21	\$ 19	\$ 18	
SDG&E:				
Financial instruments:				
Interest rate instruments ⁽¹⁾	\$ 7	\$ 13	\$ 12	Interest Expense
	(7)	(13)	(12)	(Earnings) Losses Attributable to Noncontrolling Interest
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	
Pension and other postretirement benefits:				
Amortization of actuarial loss ⁽²⁾	\$ 1	\$ 1	\$ 1	Other Income, Net
Settlements ⁽²⁾	4	—	—	Other Income, Net
Total before income tax	5	1	1	
	(1)	—	—	Income Tax Expense
Net of income tax	<u>\$ 4</u>	<u>\$ 1</u>	<u>\$ 1</u>	
Total reclassifications for the period, net of tax	\$ 4	\$ 1	\$ 1	
SoCalGas:				
Financial instruments:				
Interest rate instruments	\$ 1	\$ —	\$ 1	Interest Expense
Pension and other postretirement benefits:				
Amortization of prior service cost ⁽²⁾	\$ 1	\$ 1	\$ —	Other Income, Net
Total reclassifications for the period, net of tax	\$ 2	\$ 1	\$ 1	

⁽¹⁾ Amounts include Otay Mesa VIE. All of SDG&E's interest rate derivative activity relates to Otay Mesa VIE.

⁽²⁾ Amounts are included in the computation of net periodic benefit cost (see "Net Periodic Benefit Cost" in Note 9).

NONCONTROLLING INTERESTS

Ownership interests that are held by owners other than Sempra Energy and SDG&E in subsidiaries or entities consolidated by them are accounted for and reported as NCI. As a result, NCI is reported as a separate component of equity on the Consolidated Balance Sheets. Earnings or losses attributable to NCI are separately identified on the Consolidated Statements of Operations, and net income or loss and comprehensive income or loss attributable to NCI are separately identified on the Consolidated Statements of Comprehensive Income (Loss) and Consolidated Statements of Changes in Equity.

Sempra Mexico – Share Repurchases

In the fourth quarter of 2018, IEnova repurchased 2,000,000 shares of its outstanding common stock held by NCI for approximately \$7 million, resulting in an increase in Sempra Energy's ownership interest in IEnova from 66.4 percent to 66.5 percent. In February 2019, IEnova repurchased an additional 1,600,000 shares for approximately \$6 million.

Sale of Noncontrolling Interests

Sempra Mexico – Follow-On Offerings

On October 13, 2016, IEnova priced a private follow-on offering of its common stock in the U.S. and outside of Mexico (the International Offering) and a concurrent public common stock offering in Mexico (the Mexican Offering) at 80.00 Mexican pesos per share. The initial purchasers in the International Offering and the underwriters in the Mexican Offering were granted a 30-day option to purchase additional common shares at the global offering price, less the underwriting discount, to cover overallocments. These options were exercised on October 17, 2016. Sempra Energy also participated in the Mexican Offering by purchasing 83,125,000 shares of common stock for approximately \$351 million. After the offerings, including the issuance of shares pursuant to the exercise of the overallocation options, the aggregate shares of common stock sold in the offerings totaled 380,000,000.

The net proceeds of the offerings were approximately \$1.57 billion in U.S. dollars or 29.86 billion Mexican pesos. IEnova used the net proceeds of the offerings to repay debt financing, including the \$1.15 billion bridge loan from Sempra Global that was used to finance the IEnova Pipelines acquisition, \$100 million in loans from its parent and \$250 million of borrowings under its revolving credit facility. Additionally, \$50 million of net proceeds was used to partially fund the Ventika acquisition. Remaining proceeds were used to fund capital expenditures and for general corporate purposes. We discuss these acquisitions in Note 5.

All U.S. dollar equivalents presented here are based on an exchange rate of 18.96 Mexican pesos to 1.00 U.S. dollar as of October 13, 2016, the pricing date for the offerings. Net proceeds are after reduction for underwriting discounts and commissions and offering expenses. Upon completion of the offerings on October 19, 2016 (including the issuance of shares pursuant to the exercise of the overallocation options), Sempra Energy's beneficial ownership of IEnova decreased from approximately 81.1 percent to 66.4 percent, which did not result in a change in control. When there are changes in NCI of a subsidiary that do not result in a change of control, any difference between carrying value and fair value related to the change in ownership is recorded as an adjustment to shareholders' equity. As a result of the offerings, we recorded an increase in Sempra Energy's shareholders' equity of \$281 million, net of \$351 million for our participation in the Mexican Offering, and a \$948 million increase in Other Noncontrolling Interests for the sale of IEnova shares to third parties.

The International Offering was exempt from registration under the U.S. Securities Act of 1933, as amended (the Securities Act), and shares in the International Offering were offered and sold only to qualified institutional buyers pursuant to Rule 144A under the Securities Act and to persons outside of the U.S., in accordance with Regulation S under the Securities Act. The shares were not registered under the Securities Act or any state securities laws, and may not be offered or sold in the U.S. absent registration or an applicable exemption from the registration requirements of the Securities Act and applicable securities laws.

Sempra Renewables – Tax Equity Arrangements

In the fourth quarter of 2017, Sempra Renewables entered into membership interest purchase agreements with financial institutions to form two separate tax equity limited liability companies: one that includes a Sempra Renewables' portfolio of four solar power generation projects located in Fresno County, California and one for a wind power generation project located in Huron County, Michigan. For the solar power generation projects, Sempra Renewables received \$104 million, net of offering costs, in tax equity funding for three of the four phases in the fourth quarter of 2017. Additional funding of \$85 million, net of offering costs, for the fourth phase of the tax equity arrangement occurred in April 2018. Under the purchase agreement for the wind power generation project, Sempra Renewables received cash proceeds of \$92 million, net of offering costs, and the formation of the tax equity arrangement occurred in December 2017.

In December 2016, Sempra Renewables closed a transaction with a financial institution to form a portfolio tax equity limited liability company that includes three Sempra Renewables solar power generation projects. Also in December 2016, Sempra

Renewables closed another transaction with two financial institutions to form a tax equity limited liability company involving a Sempra Renewables wind power generation project. Sempra Renewables received cash proceeds of \$474 million, net of offering costs, for the sale of NCI relating to these transactions.

Sempra Renewables consolidates these entities and reports NCI representing the financial institutions' respective membership interests in the tax equity arrangements.

The financial institutions are noncontrolling, tax equity investors that are allocated earnings, tax attributes and cash flows in accordance with the respective limited liability company agreements. Sempra Renewables has determined that these tax equity arrangements represent substantive profit-sharing arrangements. Sempra Renewables has further determined that the appropriate method for attributing income and loss to the NCI each period is a balance sheet approach referred to as the HLBV method. Under the HLBV method, the amounts of income and loss attributable to NCI in Sempra Energy's Consolidated Statements of Operations reflect changes in the amounts the members would hypothetically receive at each balance sheet date under the liquidation provisions of the respective limited liability company agreements, assuming the net assets of these entities were liquidated at recorded amounts, after taking into account any capital transactions, such as contributions or distributions, between the entities and the members.

As we discuss in Note 5, on June 25, 2018 our board of directors approved a plan of sale that included the sale of tax equity investments and projects in development at Sempra Renewables. In December 2018, Sempra Renewables completed the sale of and deconsolidated its interests in all its solar tax equity investments. As a result of the sale, Sempra Renewables recorded a decrease of \$486 million in Other Noncontrolling Interests related to the ownership held by NCI on Sempra Energy's Consolidated Balance Sheets. In February 2019, Sempra Renewables entered into an agreement to sell its remaining wind assets and investments, which includes its wind tax equity investments. We expect to complete the sale in the second quarter of 2019.

Preferred Stock

The preferred stock at SoCalGas is presented at Sempra Energy as NCI. Sempra Energy records charges against income related to NCI for preferred stock dividends declared by SoCalGas. We provide additional information regarding SoCalGas' preferred stock in Note 13.

Other Noncontrolling Interests

The following table provides information about noncontrolling ownership interests held by others (not including preferred shareholders) recorded in Other Noncontrolling Interests in Total Equity on Sempra Energy's Consolidated Balance Sheets:

OTHER NONCONTROLLING INTERESTS				
<i>(Dollars in millions)</i>				
	Percent ownership held by noncontrolling interests		Equity (deficit) held by noncontrolling interests	
	December 31,		December 31,	
	2018	2017	2018	2017
SDG&E:				
Otay Mesa VIE	100%	100%	\$ 100	\$ 28
Sempra South American Utilities:				
Chilquinta Energía subsidiaries ⁽¹⁾	19.7 - 43.4	22.9 - 43.4	23	24
Luz del Sur	16.4	16.4	193	189
Tecsur	9.8	9.8	4	4
Sempra Mexico:				
IEnova ⁽²⁾⁽³⁾	33.5	33.6	1,605	1,532
Sempra Renewables:				
Tax equity arrangements – wind ⁽⁴⁾	NA	NA	158	181
Tax equity arrangements – solar ⁽⁴⁾	—	NA	—	450
PXiSE Energy Solutions, LLC	11.1	—	1	—
Sempra LNG & Midstream:				
Bay Gas	9.1	9.1	18	28
Liberty Gas Storage, LLC	24.6	24.6	(12)	14
Total Sempra Energy			\$ 2,090	\$ 2,450

⁽¹⁾ Chilquinta Energía has four subsidiaries with NCI held by others. Percentage range reflects the highest and lowest ownership percentages among these subsidiaries.

⁽²⁾ IEnova has a subsidiary with a 10-percent NCI held by others. The equity held by NCI is negligible at both December 31, 2018 and 2017.

⁽³⁾ IEnova has a subsidiary with a 49-percent NCI held by others. The equity held by NCI is \$13 million at December 31, 2018.

⁽⁴⁾ Net income or loss attributable to NCI is computed using the HLBV method and is not based on ownership percentages.

REVENUES

See Note 3 for a description of significant accounting policies for revenues.

OTHER COST OF SALES

Other Cost of Sales primarily includes:

- pipeline capacity costs, including the permanent release of pipeline capacity in 2016 and the associated recoveries in 2017, at Sempra LNG & Midstream;
- pipeline transportation and natural gas marketing costs at Sempra LNG & Midstream;
- electric construction services costs at Sempra South American Utilities' energy-services companies; and
- energy management service fees and costs associated with construction performed for and invoiced to third parties at Sempra Mexico.

OPERATION AND MAINTENANCE EXPENSES

Operation and Maintenance includes O&M and general and administrative costs, consisting primarily of personnel costs, purchased materials and services, litigation expense and rent.

FOREIGN CURRENCY TRANSLATION

The majority of our operations in South America as well as our natural gas distribution utility in Mexico use their local currency as their functional currency. The assets and liabilities of their foreign operations are translated into U.S. dollars at current

exchange rates at the end of the reporting period, and revenues and expenses are translated at average exchange rates for the year. The resulting noncash translation adjustments do not enter into the calculation of earnings or retained earnings, but are reflected in OCI and in AOCI.

Cash flows of these consolidated foreign subsidiaries are translated into U.S. dollars using average exchange rates for the period. We report the effect of exchange rate changes on cash balances held in foreign currencies in “Effect of Exchange Rate Changes on Cash, Cash Equivalents and Restricted Cash” on the Sempra Energy Consolidated Statements of Cash Flows.

Currency transaction losses in a currency other than the entity’s functional currency were \$5 million, \$35 million and \$1 million for the years ended December 31, 2018, 2017 and 2016, respectively, and are included in Other Income, Net, on the Sempra Energy Consolidated Statements of Operations.

TRANSACTIONS WITH AFFILIATES

We summarize amounts due from and to unconsolidated affiliates at Sempra Energy Consolidated, SDG&E and SoCalGas in the following table.

AMOUNTS DUE FROM (TO) UNCONSOLIDATED AFFILIATES

(Dollars in millions)

	December 31,	
	2018	2017
Sempra Energy Consolidated:		
Total due from various unconsolidated affiliates – current	\$ 39	\$ 37
Sempra South American Utilities ⁽¹⁾ :		
Eletrans – 4% Note ⁽²⁾	\$ 43	\$ 103
Other related party receivables	1	1
Sempra Mexico ⁽¹⁾ :		
IMG – Note due March 15, 2022 ⁽³⁾	641	487
Energía Sierra Juárez – Note ⁽⁴⁾	3	7
Total due from unconsolidated affiliates – noncurrent	\$ 688	\$ 598
Total due to various unconsolidated affiliates – current	\$ (10)	\$ (7)
Sempra Mexico ⁽¹⁾ :		
Total due to unconsolidated affiliates – noncurrent – TAG – Note due December 20, 2021 ⁽⁵⁾	\$ (37)	\$ (35)
SDG&E:		
Sempra Energy	\$ (43)	\$ (30)
SoCalGas	(6)	(4)
Various affiliates	(12)	(6)
Total due to unconsolidated affiliates – current	\$ (61)	\$ (40)
Income taxes due from Sempra Energy ⁽⁶⁾	\$ 5	\$ 27
SoCalGas:		
SDG&E	\$ 6	\$ 4
Various affiliates	1	—
Total due from unconsolidated affiliates – current	\$ 7	\$ 4
Total due to unconsolidated affiliates – current – Sempra Energy	\$ (34)	\$ (35)
Income taxes due (to) from Sempra Energy ⁽⁶⁾	\$ (4)	\$ 10

⁽¹⁾ Amounts include principal balances plus accumulated interest outstanding.

⁽²⁾ U.S. dollar-denominated loan, at a fixed interest rate with no stated maturity date, to provide project financing for the construction of transmission lines at Eletrans, comprising JVs of Chilquinta Energía.

⁽³⁾ Mexican peso-denominated revolving line of credit for up to 14.2 billion Mexican pesos or approximately \$721 million U.S. dollar-equivalent, at a variable interest rate based on the 91-day Interbank Equilibrium Interest Rate plus 220 bps (10.84 percent at December 31, 2018), to finance construction of the natural gas marine pipeline.

⁽⁴⁾ U.S. dollar-denominated loan, at a variable interest rate based on the 30-day LIBOR plus 637.5 bps (8.89 percent at December 31, 2018) with no stated maturity date, to finance the first phase of the Energía Sierra Juárez wind project, which is a joint venture of IEnova.

⁽⁵⁾ U.S. dollar-denominated loan, at a variable interest rate based on 6-month LIBOR plus 290 bps (5.77 percent at December 31, 2018).

⁽⁶⁾ SDG&E and SoCalGas are included in the consolidated income tax return of Sempra Energy and are allocated income tax expense from Sempra Energy in an amount equal to that which would result from each company having always filed a separate return.

The following table summarizes revenues and cost of sales from unconsolidated affiliates.

REVENUES AND COST OF SALES FROM UNCONSOLIDATED AFFILIATES			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2018	2017	2016
Revenues:			
Sempra Energy Consolidated	\$ 64	\$ 43	\$ 25
SDG&E	5	8	7
SoCalGas	64	74	76
Cost of Sales:			
Sempra Energy Consolidated	\$ 46	\$ 47	\$ 72
SDG&E	73	71	64

California Utilities

Sempra Energy, SDG&E and SoCalGas provide certain services to each other and are charged an allocable share of the cost of such services. Also, from time-to-time, SDG&E and SoCalGas may make short-term advances of surplus cash to Sempra Energy at interest rates based on the federal funds effective rate plus a margin of 13 to 20 bps, depending on the loan balance.

SoCalGas provides natural gas transportation and storage services for SDG&E and charges SDG&E for such services monthly. SoCalGas records revenues and SDG&E records a corresponding amount to cost of sales.

SDG&E and SoCalGas charge one another, as well as other Sempra Energy affiliates, for shared asset depreciation. SoCalGas and SDG&E record revenues and the affiliates record corresponding amounts to O&M.

The natural gas supply for SDG&E's and SoCalGas' core natural gas customers is purchased by SoCalGas as a combined procurement portfolio managed by SoCalGas. Core customers are primarily residential and small commercial and industrial customers. This core gas procurement function is considered a shared service; therefore, revenues and costs related to SDG&E are presented net in SoCalGas' Statements of Operations.

SDG&E has a 20-year contract for up to 155 MW of renewable power supplied from the Energía Sierra Juárez wind power generation facility, which, as a lessee, SDG&E accounts for as an operating lease. Energía Sierra Juárez is a 50-percent owned and unconsolidated JV of Sempra Mexico.

Sempra Mexico

Sempra Mexico, through its wholly owned subsidiaries, DEN and IEnova Pipelines, provides operating and maintenance services to TAG, and also provides personnel under an administrative services arrangement.

Sempra Renewables

Sempra Renewables, through its wholly owned subsidiary, Sempra Renewables Services, Inc., provides project administration and operating and maintenance services to certain of its renewable energy unconsolidated JVs.

Sempra LNG & Midstream

Sempra LNG & Midstream provides project administration and operating and maintenance services to Cameron LNG JV, and also provides personnel under an administrative services arrangement. Sempra LNG & Midstream has an agreement to provide transportation services to Cameron LNG JV for capacity on the Cameron Interstate Pipeline.

Sempra LNG & Midstream has an agreement with Rockies Express for capacity on REX. We sold our 25-percent interest in Rockies Express in March 2016, at which time Rockies Express ceased being an affiliate.

Guarantees

Sempra Energy has provided guarantees to certain of its JVs as we discuss in Note 6.

RESTRICTED NET ASSETS

Sempra Energy Consolidated

As we discuss below, the California Utilities and certain other Sempra Energy subsidiaries have restrictions on the amount of funds that can be transferred to Sempra Energy by dividend, advance or loan as a result of conditions imposed by various regulators. Additionally, certain other Sempra Energy subsidiaries are subject to various financial and other covenants and other restrictions contained in debt and credit agreements (described in Note 7) and in other agreements that limit the amount of funds that can be transferred to Sempra Energy. At December 31, 2018, Sempra Energy was in compliance with all covenants related to its debt agreements.

At December 31, 2018, the amount of restricted net assets of consolidated entities of Sempra Energy, including the California Utilities discussed below, that may not be distributed to Sempra Energy in the form of a loan or dividend is \$9.3 billion. Additionally, the amount of restricted net assets of our unconsolidated entities is \$18.6 billion. Although the restrictions cap the amount of funding that the various operating subsidiaries can provide to Sempra Energy, we do not believe these restrictions will have a significant impact on our ability to access cash to pay dividends and fund operating needs.

As we discuss in Note 6, \$332 million of Sempra Energy's consolidated retained earnings represents undistributed earnings of equity method investments at December 31, 2018.

California Utilities

The CPUC's regulation of the California Utilities' capital structures limits the amounts available for dividends and loans to Sempra Energy. At December 31, 2018, Sempra Energy could have received combined loans and dividends of approximately \$552 million from SDG&E and approximately \$618 million from SoCalGas.

The payment and amount of future dividends by SDG&E and SoCalGas are at the discretion of their respective boards of directors. The following restrictions limit the amount of retained earnings that may be paid as common stock dividends or loaned to Sempra Energy from either utility:

- The CPUC requires that SDG&E's and SoCalGas' common equity ratios be no lower than one percentage point below the CPUC-authorized percentage of each entity's authorized capital structure. The authorized percentage at December 31, 2018 is 52 percent at both SDG&E and SoCalGas.
- The FERC requires SDG&E to maintain a common equity ratio of 30 percent or above.
- The California Utilities have a combined revolving credit line that requires each utility to maintain a ratio of consolidated indebtedness to consolidated capitalization (as defined in the agreement) of no more than 65 percent, as we discuss in Note 7.

Based on these restrictions, at December 31, 2018, SDG&E's restricted net assets were \$5.5 billion and SoCalGas' restricted net assets were \$3.6 billion, which could not be transferred to Sempra Energy.

Sempra Texas Utility

Sempra Texas Utility owns an indirect, 100-percent interest in Oncor Holdings, which owns an 80.25-percent interest in Oncor. As we discuss in Note 6, we account for our investment in Oncor Holdings under the equity method. Significant restrictions at Oncor include:

- Oncor may not pay any dividends or make any other distributions (except for contractual tax payments) if a majority of its independent directors or a minority member director determines that it is in the best interests of Oncor to retain such amounts to meet expected future requirements.
- At all times, Oncor will remain in compliance with the debt-to-equity ratio established by the PUCT for ratemaking purposes, and Oncor will not pay dividends or other distributions (except for contractual tax payments), if that payment would cause its debt-to-equity ratio to exceed the ratio approved by the PUCT. The PUCT authorized debt-to-equity ratio at December 31, 2018 is 57.5 percent debt to 42.5 percent equity.
- If the credit rating on Oncor's senior secured debt by any of the three major credit rating agencies falls below BBB (or the equivalent), Oncor will suspend dividends and other distributions (except for contractual tax payments), unless otherwise allowed by the PUCT. At December 31, 2018, all of Oncor's senior secured ratings were above BBB.
- Oncor has a revolving credit line and term loan credit agreement that requires it to maintain a consolidated senior debt-to-capitalization ratio of no more than 65 percent and observe certain customary reporting requirements and other affirmative covenants. At December 31, 2018, Oncor was in compliance with this and all other covenants.

Based on these restrictions, at December 31, 2018, Oncor's restricted net assets were \$9.7 billion, which could not be transferred to Sempra Energy.

Sempra South American Utilities

At Sempra South American Utilities, Peru requires domestic corporations to maintain minimum legal reserves as a percentage of capital stock, resulting in restricted net assets of \$35 million at Luz del Sur at December 31, 2018.

Sempra Mexico

Significant restrictions at Sempra Mexico include:

- Mexico requires domestic corporations to maintain minimum legal reserves as a percentage of capital stock, resulting in restricted net assets of \$153 million at Sempra Energy's consolidated Mexican subsidiaries at December 31, 2018.
- Wholly owned IEnova Pipelines has a long-term debt agreement that requires it to maintain a reserve account to pay the projects' debt. Under this restriction, net assets totaling \$10 million are restricted at December 31, 2018.
- Wholly owned Ventika has long-term debt agreements that require it to maintain reserve accounts to pay the projects' debt. The debt agreements may limit the project companies' ability to incur liens, incur additional indebtedness, make investments, pay cash dividends and undertake certain additional actions. Under these restrictions, net assets totaling \$14 million are restricted at December 31, 2018.
- Energía Sierra Juárez, a 50-percent owned and unconsolidated JV of Sempra Mexico, has long-term debt agreements that require the establishment and funding of project and reserve accounts to which the proceeds of loans, letter of credit borrowings, project revenues and other amounts are deposited and applied in accordance with the debt agreements. The long-term debt agreements also limit the JV's ability to incur liens, incur additional indebtedness, make acquisitions and undertake certain actions. Under these restrictions, net assets totaling \$14 million are restricted at December 31, 2018.
- TAG, a 50-percent owned and unconsolidated JV of Sempra Mexico, has a long-term debt agreement that requires it to maintain a reserve account to pay the projects' debt. Under these restrictions, net assets totaling \$89 million are restricted at December 31, 2018.

Sempra Renewables

Sempra Renewables has 50-percent owned and unconsolidated wind JVs, which have debt agreements that require each JV to maintain reserve accounts in order to pay the projects' debt service and O&M requirements. We discuss Sempra Energy guarantees associated with these requirements in Note 6. At December 31, 2018, as a result of these requirements, there were total restricted net assets at these JVs of approximately \$122 million.

Sempra LNG & Midstream

Sempra LNG & Midstream has an equity method investment in Cameron LNG JV, which has debt agreements that require the establishment and funding of project accounts to which the proceeds of loans, project revenues and other amounts are deposited and applied in accordance with the debt agreements. The debt agreements require the JV to maintain reserve accounts in order to pay the project debt service, and also contain restrictions related to the payment of dividends and other distributions to the members of the JV. We discuss Sempra Energy guarantees associated with Cameron LNG JV's debt agreements in Note 6. Under these restrictions, net assets of Cameron LNG JV of approximately \$8.7 billion are restricted at December 31, 2018.

OTHER INCOME, NET

Other Income, Net on the Consolidated Statements of Operations consists of the following:

OTHER INCOME, NET (Dollars in millions)	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Sempra Energy Consolidated:			
Allowance for equity funds used during construction	\$ 98	\$ 168	\$ 116
Investment (losses) gains ⁽²⁾	(6)	56	23
Gains (losses) on interest rate and foreign exchange instruments, net	7	47	(32)
Foreign currency transaction losses ⁽³⁾	(5)	(35)	(1)
Non-service component of net periodic benefit (cost) credit	(37)	(21)	6
Electrical infrastructure relocation income	7	3	10
Interest on regulatory balancing accounts, net	2	3	4
Sundry, net	6	12	12
Total	\$ 72	\$ 233	\$ 138
SDG&E:			
Allowance for equity funds used during construction	\$ 61	\$ 63	\$ 46
Non-service component of net periodic benefit (cost) credit	(6)	4	14
Interest on regulatory balancing accounts, net	4	3	3
Sundry, net	(3)	—	1
Total	\$ 56	\$ 70	\$ 64
SoCalGas:			
Allowance for equity funds used during construction	\$ 36	\$ 44	\$ 40
Non-service component of net periodic benefit (cost) credit	(10)	(5)	6
Interest on regulatory balancing accounts, net	(2)	—	1
Sundry, net	(9)	(8)	(9)
Total	\$ 15	\$ 31	\$ 38

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

⁽²⁾ Represents investment (losses) gains on dedicated assets in support of our executive retirement and deferred compensation plans. These amounts are partially offset by corresponding changes in compensation expense related to the plans, recorded in O&M on the Consolidated Statements of Operations.

⁽³⁾ Includes losses of \$3 million and \$35 million in 2018 and 2017, respectively, from translation to U.S. dollars of a Mexican peso-denominated loan to the IMG JV, which are offset by corresponding amounts included in Equity Earnings on the Consolidated Statements of Operations.

NOTE 2. NEW ACCOUNTING STANDARDS

We describe below recent accounting pronouncements that have had or may have a significant effect on our financial condition, results of operations, cash flows or disclosures.

ASU 2014-09, “Revenue from Contracts with Customers,” ASU 2015-14, “Deferral of the Effective Date,” ASU 2016-08, “Principal versus Agent Considerations (Reporting Revenue Gross versus Net),” ASU 2016-10, “Identifying Performance Obligations and Licensing” and ASU 2016-12, “Narrow-Scope Improvements and Practical Expedients”: ASU 2014-09 adds ASC 606 to provide accounting guidance for the recognition of revenue from contracts with customers and affects all entities that enter into contracts to provide goods or services to their customers. The guidance also provides a model for the measurement and recognition of gains and losses on the sale of certain nonfinancial assets, such as property and equipment, including real estate. This guidance must be adopted using either a full retrospective approach for all periods presented in the period of adoption or a modified retrospective approach. Amending ASU 2014-09, ASU 2016-08 clarifies the implementation guidance on principal versus agent considerations, ASU 2016-10 clarifies the determination of whether a good or service is separately identifiable from other promises and revenue recognition related to licenses of intellectual property, and ASU 2016-12 provides guidance on transition, collectability, noncash consideration, and the presentation of sales and other similar taxes. The ASUs are codified in ASC 606.

We adopted ASC 606 on January 1, 2018, applying the modified retrospective transition method to all contracts as of January 1, 2018 and elected to use certain practical expedients available under the transition guidance. The impact from adoption was not material to our financial statements, and the timing of our revenue recognition has remained materially consistent before and after

the adoption of ASC 606. The new revenue standard provides specific guidance for combining contracts, which resulted in a prospective reclassification between cost of sales and revenues within our Sempra LNG & Midstream segment. This reclassification had no impact on Sempra Energy's consolidated revenues or cost of sales. Our additional disclosures about the nature, amount, timing and uncertainty of revenues arising from contracts with customers are included in Note 3.

ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities" and ASU 2018-03, "Technical Corrections and Improvements to Financial Instruments – Overall": In addition to the presentation and disclosure requirements for financial instruments, ASU 2016-01 requires entities to measure equity investments, other than those accounted for under the equity method, at fair value and recognize changes in fair value in net income. Entities will no longer be able to use the cost method of accounting for equity securities. However, for equity investments without readily determinable fair values that do not qualify for the practical expedient to estimate fair value using NAV per share, entities may elect a measurement alternative that will allow those investments to be recorded at cost, less impairment, and adjusted for subsequent observable price changes. ASU 2018-03 clarifies that the prospective transition approach for equity investments without readily determinable fair values is meant only for instances in which the measurement alternative is elected. Entities must record a cumulative-effect adjustment to the balance sheet as of the beginning of the first reporting period in which the standard is adopted, except for equity investments without readily determinable fair values, for which the guidance will be applied prospectively.

We adopted ASU 2016-01 and ASU 2018-03 on January 1, 2018. Sempra Energy recognized a cumulative-effect adjustment to decrease Retained Earnings and Other Investments as of January 1, 2018 by \$1 million.

ASU 2016-02, "Leases," ASU 2018-01, "Land Easement Practical Expedient for Transition to Topic 842," ASU 2018-10, "Codification Improvements to Topic 842, Leases," ASU 2018-11, "Leases (Topic 842): Targeted Improvements" and ASU 2018-20, "Narrow-Scope Improvements for Lessors" (collectively referred to as the "lease standard"): ASU 2016-02 requires entities to recognize substantially all of their leases on the balance sheet as ROU assets and lease liabilities. Entities may elect to exclude from the balance sheet those leases with a term of 12 months or less. For lessees, a lease is classified as finance or operating, and initially the asset and liability for each lease type is generally measured at the present value of the fixed lease payments. ASU 2016-02 also requires new qualitative and quantitative disclosures for both lessees and lessors. ASU 2018-10 makes technical corrections and clarifications to the accounting guidance in ASC 842.

For lessors, accounting for leases is largely unchanged from previous provisions of U.S. GAAP, other than certain changes to the lease identification criteria and aligning the principles of the lessor model with those introduced in ASC 606. ASU 2018-20 addresses the following issues that lessors encounter when applying ASU 2016-02: (a) sales taxes and other similar taxes collected from lessees, (b) certain lessor costs paid directly by the lessee and (c) recognition of variable payments for contracts with lease and nonlease components.

For public entities, the lease standard is effective for fiscal years beginning after December 15, 2018, including interim periods therein, with early adoption permitted. ASU 2016-02 requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. ASU 2018-11 provides entities an optional transition method to apply the new guidance as of the adoption date, rather than as of the earliest period presented. In transition, entities may elect certain practical expedients when applying ASU 2016-02. These include a package of practical expedients that must be applied in its entirety to all leases that had commenced before the effective date and would allow an entity to not reassess (a) the existence of a lease, (b) lease classification or (c) determination of initial direct costs, which effectively allows entities to carryforward accounting conclusions under previous U.S. GAAP. ASU 2016-02 also includes a practical expedient to use hindsight in making judgments when determining the lease term and any long-lived asset impairment. ASU 2018-01 allows entities to elect a practical expedient that would exclude application of ASU 2016-02 to land easements that existed prior to its adoption, if they were not accounted for as leases under previous U.S. GAAP. In addition, ASU 2016-02 and ASU 2018-11 provide practical expedients to the lessee and lessor, respectively, for separating lease and non-lease components. These ASUs are codified in ASC 842.

We will adopt the lease standard on January 1, 2019 using the optional transition method to apply the new guidance prospectively as of January 1, 2019, rather than as of the earliest period presented. We plan to elect the package of practical expedients and the land easement practical expedient described above. We do not plan to elect the practical expedient to use hindsight.

The adoption of the lease standards will not change our previously reported financial statements. However, on a prospective basis, a significant portion of finance lease costs for PPAs that have historically been classified in Cost of Electric Fuel and Purchased Power will be classified in Depreciation and Amortization Expense and Interest Expense on Sempra Energy's and SDG&E's statements of operations. In 2018, we recorded \$117 million in purchased-power costs from capital leases in Cost of Electric Fuel and Purchased Power at SDG&E and Sempra Energy. Further, the adoption of the lease standard will have a material impact on our balance sheets at January 1, 2019 due to the initial recognition of ROU assets and lease liabilities for operating leases. Our finance leases were already included on our balance sheets prior to adoption of the lease standard, consistent with previous U.S.

GAAP for capital leases. We will include additional disclosures about our leases in our Notes to Consolidated Financial Statements beginning in the first quarter of 2019.

The following table shows the expected (decrease) increase on our balance sheets at January 1, 2019 from adoption of the lease standard.

EXPECTED IMPACT FROM ADOPTION OF THE LEASE STANDARD				
<i>(Dollars in millions)</i>				
	Sempra Energy Consolidated	SDG&E	SoCalGas	
Other current assets	\$ (68)	\$ —	\$ —	
Property, plant and equipment, net	(147)	—	—	
Right-of-use assets – operating leases	623	130	116	
Deferred income taxes	(3)	—	—	
Other current liabilities	81	20	23	
Long-term debt	(138)	—	—	
Deferred credits and other	445	110	93	
Retained earnings	17	—	—	

As a result of the adoption of the lease standard, we will derecognize our corporate headquarters building lease in accordance with the transition provisions for build-to-suit arrangements. On a prospective basis, we will account for the corporate headquarters building lease as an operating lease. The expected impact is included in the above table.

ASU 2016-13, “Measurement of Credit Losses on Financial Instruments”: ASU 2016-13 changes how entities will measure credit losses for most financial assets and certain other instruments. The standard introduces an “expected credit loss” impairment model that requires immediate recognition of estimated credit losses expected to occur over the remaining life of most financial assets measured at amortized cost, including trade and other receivables, loan commitments and financial guarantees. ASU 2016-13 also requires use of an allowance to record estimated credit losses on available-for-sale debt securities and expands disclosure requirements regarding an entity’s assumptions, models and methods for estimating the credit losses.

For public entities, ASU 2016-13 is effective for fiscal years beginning after December 15, 2019, including interim periods therein, with early adoption permitted for fiscal years beginning after December 15, 2018. The amendments are to be applied using a modified retrospective approach through a cumulative-effect adjustment to retained earnings at the beginning of the first reporting period in the year of adoption. We are currently evaluating the effect of the standard on our ongoing financial reporting and plan to adopt the standard on January 1, 2020.

ASU 2017-04, “Simplifying the Test for Goodwill Impairment”: ASU 2017-04 removes the second step of the goodwill impairment test, which requires a hypothetical purchase price allocation. An entity will be required to apply a one-step quantitative test and record the amount of goodwill impairment as the excess of a reporting unit’s carrying amount over its fair value, not to exceed the carrying amount of goodwill. For public entities, ASU 2017-04 is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019, with early adoption permitted. The amendments are to be applied on a prospective basis. We plan to adopt the standard on January 1, 2020.

ASU 2017-05, “Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets”: ASU 2017-05 clarifies the scope of accounting for the derecognition or partial sale of nonfinancial assets to exclude all businesses and nonprofit activities. ASU 2017-05 also provides a definition for in-substance nonfinancial assets and additional guidance on partial sales of nonfinancial assets. We adopted the standard in conjunction with our adoption of ASC 606 on January 1, 2018 using the modified retrospective transition method and it did not materially affect our financial condition, results of operations or cash flows.

ASU 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost”: ASU 2017-07 requires the service cost component of net periodic benefit costs to be presented in the same income statement line item as other employee compensation costs arising from services rendered during the period and the other components of net periodic benefit costs to be presented separately outside of operating income. The guidance also allows only the service cost component to be eligible for capitalization. Amendments are to be applied retrospectively for presentation of costs and prospectively for capitalization of service costs. The guidance allows a practical expedient that permits use of previously disclosed service costs and other costs from the pension and other postretirement benefit plan disclosure in the comparative periods as appropriate estimates when retrospectively changing the presentation of these costs in the statements of operations. We adopted the standard on January 1, 2018 and elected the practical expedient available under the transition guidance.

Upon adoption of ASU 2017-07, our Consolidated Statements of Operations were impacted as follows:

IMPACT FROM ADOPTION OF ASU 2017-07

(Dollars in millions)

	Years ended December 31,					
	2017			2016		
	As previously reported	Effect of adoption	As adjusted	As previously reported	Effect of adoption	As adjusted
Sempra Energy:						
Operation and maintenance	\$ 3,117	\$ (21)	\$ 3,096	\$ 2,970	\$ 6	\$ 2,976
Other income, net	254	(21)	233	132	6	138
SDG&E:						
Operation and maintenance	\$ 1,020	\$ 4	\$ 1,024	\$ 1,048	\$ 14	\$ 1,062
Total operating expenses	3,763	4	3,767	3,263	14	3,277
Operating income	713	(4)	709	990	(14)	976
Other income, net	66	4	70	50	14	64
SoCalGas:						
Operation and maintenance	\$ 1,479	\$ (5)	\$ 1,474	\$ 1,385	\$ 6	\$ 1,391
Total operating expenses	3,163	(5)	3,158	2,914	6	2,920
Operating income	622	5	627	557	(6)	551
Other income, net	36	(5)	31	32	6	38

ASU 2017-12, “Targeted Improvements to Accounting for Hedging Activities”: ASU 2017-12 changes the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge accounting results. More specifically, the guidance expands the exposures that can be hedged to align with an entity’s risk management strategies, alleviates documentation requirements, eliminates the concept of recognizing periodic hedge ineffectiveness for cash flow and net investment hedges and requires entities to present the entire change in the fair value of a hedging instrument in the same income statement line item as the earnings effect of the hedged item. Transition elections are available for all hedges that exist at the date of adoption. We early adopted ASU 2017-12 on January 1, 2018 by applying the modified retrospective approach to the accounting for existing hedging relationships. Upon adoption of ASU 2017-12, Sempra Energy recognized a cumulative-effect adjustment to increase Retained Earnings and Accumulated Other Comprehensive Loss as of January 1, 2018 by \$3 million.

ASU 2018-02, “Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income”: ASU 2018-02 contains amendments that allow a reclassification from AOCI to retained earnings for stranded tax effects resulting from the TCJA. Under ASU 2018-02, an entity will be required to provide certain disclosures regarding stranded tax effects, including its accounting policy related to releasing the income tax effects from AOCI. The amendments in this update can be applied either as of the beginning of the period of adoption or retrospectively as of the date of enactment of the TCJA and to each period in which the effect of the TCJA is recognized. For public entities, ASU 2018-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods therein, with early adoption permitted. We will adopt ASU 2018-02 on January 1, 2019 and will reclassify the income tax effects of the TCJA from AOCI to retained earnings.

We expect the impact from adoption of ASU 2018-02 on January 1, 2019 to be as follows:

- Sempra Energy: increase of \$40 million to beginning Retained Earnings, \$2 million to noncurrent Regulatory Liabilities and \$42 million to Accumulated Other Comprehensive Loss;
- SDG&E: increase of \$2 million to beginning Retained Earnings and Accumulated Other Comprehensive Loss; and
- SoCalGas: increase of \$2 million to beginning Retained Earnings, \$2 million to noncurrent Regulatory Liabilities and \$4 million to Accumulated Other Comprehensive Loss.

ASU 2018-05, “Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118”: As a result of the TCJA, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 118), which provides guidance on accounting for the TCJA’s impact. Under SAB 118, an entity may apply an approach similar to the measurement period in a business combination. That is, an entity would record those impacts for which the accounting is complete. For matters that are not certain, the entity would either (a) recognize provisional amounts to the extent that they are reasonably estimable and adjust them over time as more information becomes available, or (b) for any specific income tax effects of the TCJA for which a reasonable estimate cannot be determined, continue to apply ASC 740, *Income Taxes*, on the basis of the provisions of the tax laws that were in effect immediately before the TCJA was signed into law; the entity would not adjust current or deferred income taxes for those tax effects of the TCJA until a

reasonable estimate can be determined. ASU 2018-05 amends ASC 740 by incorporating SAB 118 and was effective upon issuance. We applied SAB 118 and ASU 2018-05 in 2018. The income tax effects of the TCJA that we recorded in 2017 were provisional. We adjusted our provisional estimates and completed our accounting for the income tax effects of the TCJA in 2018, as we discuss in Note 8.

ASU 2018-13, “Changes to the Disclosure Requirements for Fair Value Measurement” and ASU 2018-14, “Changes to the Disclosure Requirements for Defined Benefit Plans”: ASU 2018-13 and ASU 2018-14 are intended to improve the effectiveness of disclosures. ASU 2018-13 adds, removes and modifies certain disclosure requirements related to fair value measurements. ASU 2018-14 adds, removes and clarifies certain disclosure requirements related to defined benefit pension and other postretirement plans. For public entities, ASU 2018-13 is effective for annual reporting periods beginning after December 15, 2019, including interim periods therein, with early adoption permitted. For public entities, ASU 2018-14 is effective for annual reporting periods ending after December 15, 2020, with early adoption permitted. We adopted both ASU 2018-13 and ASU 2018-14 on December 31, 2018 and have updated our financial statement disclosures accordingly.

NOTE 3. REVENUES

The following table disaggregates our revenues from contracts with customers by major service line, market and timing of recognition and provides a reconciliation to total revenues by segment.

DISAGGREGATED REVENUES									
<i>(Dollars in millions)</i>		Year ended December 31, 2018							
	SDG&E	SoCalGas	Sempra South American Utilities	Sempra Mexico	Sempra Renewables	Sempra LNG & Midstream	Consolidating adjustments	Sempra Energy Consolidated	
By major service line:									
Utilities	\$ 4,788	\$ 3,577	\$ 1,507	\$ 78	\$ —	\$ —	\$ (69)	\$ 9,881	
Midstream	—	—	—	630	—	224	(138)	716	
Renewables	—	—	—	108	46	2	(2)	154	
Other	—	—	73	203	—	6	(6)	276	
Revenues from contracts with customers	\$ 4,788	\$ 3,577	\$ 1,580	\$ 1,019	\$ 46	\$ 232	\$ (215)	\$ 11,027	
By market:									
Electric	\$ 4,297	\$ —	\$ 1,580	\$ 308	\$ 46	\$ 8	\$ (12)	\$ 6,227	
Gas	491	3,577	—	711	—	224	(203)	4,800	
Revenues from contracts with customers	\$ 4,788	\$ 3,577	\$ 1,580	\$ 1,019	\$ 46	\$ 232	\$ (215)	\$ 11,027	
By timing of recognition:									
Over time	\$ 4,677	\$ 3,454	\$ 1,554	\$ 1,019	\$ 46	\$ 210	\$ (204)	\$ 10,756	
Point in time	111	123	26	—	—	22	(11)	271	
Revenues from contracts with customers	\$ 4,788	\$ 3,577	\$ 1,580	\$ 1,019	\$ 46	\$ 232	\$ (215)	\$ 11,027	
Revenues from contracts with customers	\$ 4,788	\$ 3,577	\$ 1,580	\$ 1,019	\$ 46	\$ 232	\$ (215)	\$ 11,027	
Utilities regulatory revenues	(220)	385	—	—	—	—	—	165	
Other revenues	—	—	5	357	78	240	(185)	495	
Total revenues	\$ 4,568	\$ 3,962	\$ 1,585	\$ 1,376	\$ 124	\$ 472	\$ (400)	\$ 11,687	

REVENUES FROM CONTRACTS WITH CUSTOMERS

Our revenues from contracts with customers are primarily related to the generation, transmission and distribution of electricity and the transmission, distribution and storage of natural gas through our regulated utilities. We also provide other midstream and renewable energy-related services. We assess our revenues on a contract-by-contract basis as well as a portfolio basis to determine the nature, amount, timing and uncertainty, if any, of revenues being recognized.

We generally recognize revenues when performance of the promised commodity service is provided to our customers and invoice our customers for an amount that reflects the consideration we are entitled to in exchange for those services. We consider the delivery and transmission of electricity and natural gas and providing of natural gas storage services as ongoing and integrated services. Generally, electricity or natural gas services are received and consumed by the customer simultaneously. Our performance obligations related to these services are satisfied over time and represent a series of distinct services that are substantially the same and that have the same pattern of transfer to the customers. We recognize revenue based on units delivered, as the satisfaction of our performance obligations can be directly measured by the amount of electricity or natural gas delivered to the customer. In most cases, the right to consideration from the customer directly corresponds to the value transferred to the customer and we recognize revenue in the amount that we have the right to invoice. We provide further details of our revenue streams below.

The payment terms in our customer contracts vary. Typically, we have an unconditional right to customer payments, which are due after the performance obligation to the customer is satisfied. The term between invoicing and when payment is due is typically between 10 and 90 days.

We have elected the practical expedient to exclude sales and usage-based taxes from revenues. In addition, the California Utilities pay franchise fees to operate in various municipalities. The California Utilities bill these franchise fees to their customers based on a CPUC-authorized rate. These franchise fees, which are required to be paid regardless of the California Utilities' ability to collect from the customer, are accounted for on a gross basis and reflected in utilities revenues from contracts with customers and operating expense.

Utilities Revenues

Utilities revenues represent the majority of our consolidated revenues from contracts with customers and include:

The generation, transmission and distribution of electricity at:

- SDG&E
- Sempra South American Utilities' Chilquinta Energía and Luz del Sur

The transmission, distribution and storage of natural gas at:

- SDG&E
- SoCalGas
- Sempra Mexico's Ecogas

Utilities revenues are derived from and recognized upon the delivery of electricity or natural gas services to customers. Amounts that we bill our customers are based on tariffs set by regulators within the respective state or country. For SDG&E and SoCalGas, which follow the provisions of U.S. GAAP governing rate-regulated operations as we discuss in Note 1, amounts that we bill to customers also include adjustments for previously recognized regulatory revenues.

The California Utilities and Ecogas recognize revenues based on regulator-approved revenue requirements, which allows the utilities to recover their reasonable cost of O&M and provides the opportunity to realize their authorized rates of return on their investments. While the California Utilities' revenues are not affected by actual sales volumes, the pattern of their revenue recognition during the year is affected by seasonality. SoCalGas recognizes annual authorized revenue for core natural gas customers using seasonal factors established in the Triennial Cost Allocation Proceeding. Accordingly, a significant portion of SoCalGas' annual earnings are recognized in the first and fourth quarters of each year. SDG&E's authorized revenue recognition is also impacted by seasonal factors, resulting in higher earnings in the third quarter when electric loads are typically higher than in the other three quarters of the year.

SDG&E has an arrangement to provide the California ISO with the ability to control its high-voltage transmission lines for prices approved by the FERC. Revenue is recognized over time as access is provided to the California ISO.

Chilquinta Energía and Luz del Sur, our electric distribution utilities in South America, recognize revenues based on tariffs designed to provide for a pass-through to customers of transmission and energy costs, recovery of reasonable O&M based on an efficient model distribution company, incentives to reduce costs and make needed capital investments and a regulated rate of return on the distributor's regulated asset base.

Factors that can affect the amount, timing and uncertainty of revenues and cash flows include weather, seasonality and timing of customer billings, which may result in unbilled revenues that can vary significantly from month to month and generally approximate one-half month's deliveries.

The California Utilities recognize revenues from the sale of allocated California GHG emissions allowances at quarterly auctions administered by CARB. GHG allowances are delivered to CARB in advance of the quarterly auctions, and the California Utilities have the right to payment when the GHG allowances are sold at auction. GHG revenue is recognized on a point in time basis within the quarter the auction is held. The California Utilities balance costs and revenues associated with the GHG program through regulatory balancing accounts.

Midstream Revenues

Midstream revenues at Sempra Mexico and Sempra LNG & Midstream typically represent revenues from long-term, U.S. dollar-based contracts with customers for the sale of natural gas and LNG, as well as storage and transportation of natural gas. Invoiced amounts are based on the volume of natural gas delivered and contracted prices.

Sempra Mexico's marketing operations sell natural gas to the CFE and other customers under supply agreements. Sempra Mexico recognizes the revenue from the sale of natural gas upon transfer of the natural gas via pipelines to customers at the agreed upon delivery points, and in the case of the CFE, at its thermoelectric power plants.

Through its marketing operations, Sempra LNG & Midstream has contracts to sell natural gas and LNG to Sempra Mexico that allow Sempra Mexico to satisfy its obligations under supply agreements with the CFE and other customers, and to supply Sempra Mexico's TdM power plant. Because Sempra Mexico either immediately delivers the natural gas to its customers or consumes the benefits simultaneously (by using the gas to supply TdM), revenues from Sempra LNG & Midstream's sale of natural gas to Sempra Mexico are generally recognized over time as delivered. Revenues from LNG sales are recognized at the point when the cargo is delivered to Sempra Mexico.

Revenues from the sale of LNG and natural gas by Sempra LNG & Midstream to Sempra Mexico are adjusted for indemnity payments and profit sharing. We consider these adjustments to be forms of variable consideration that are associated with the sale of LNG and natural gas to Sempra Mexico, and therefore, Sempra LNG & Midstream records the related costs as an offset to revenues, with no impact to Sempra Energy's consolidated revenues.

We recognize storage revenue from firm capacity reservation agreements, under which we collect a fee for reserving storage capacity for customers in our underground storage facilities. Under these firm agreements, customers pay a monthly fixed reservation fee based on the storage capacity reserved rather than the actual volumes stored. For the fixed-fee component, revenue is recognized on a straight-line basis over the term of the contract. We bill customers for any capacity used in excess of the contracted capacity and such revenues are recognized in the month of occurrence. We also recognize revenue for interruptible storage services. As we discuss in Note 5, on February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas).

We generate pipeline transportation revenues from firm agreements, under which customers pay a fee for reserving transportation capacity. Revenue is recognized when the volumes are delivered to the customers' agreed upon delivery point. We recognize revenues for our stand-ready obligation to provide capacity and transportation services throughout the contractual delivery period, as the benefits are received and consumed simultaneously as customers utilize pipeline capacity for the transport and receipt of natural gas and LPG. Invoiced amounts are based on a variable usage fee and a fixed capacity charge, adjusted for the CPI, the effects of any foreign currency translation and the actual quantity of commodity transported.

Renewables Revenues

Sempra Renewables and Sempra Mexico develop, invest in and operate solar and wind facilities that have long-term PPAs to sell the electricity and the related green energy attributes they generate to customers, generally load serving entities, and also for Sempra Mexico, industrial and other customers. Load serving entities will sell electric service to their end-users and wholesale customers immediately upon receipt of our power delivery, and industrial and other customers immediately consume the electricity to run their facilities, and thus, we recognize the revenue under the PPAs as the electricity is generated. We invoice customers based on the volume of energy delivered at rates pursuant to the PPAs. As we discuss in Note 5, in December 2018, we completed the sale of Sempra Renewables' U.S. operating solar assets, solar and battery storage development projects and its 50-percent ownership interest in a wind power generation facility. In February 2019, Sempra Renewables entered into an agreement to sell its remaining wind assets and investments. We expect to complete the sale in the second quarter of 2019.

Sempra LNG & Midstream has a contractual agreement to provide scheduling and marketing of renewable power for Sempra Renewables. Invoiced amounts are based on a fixed fee per MWh scheduled.

Other Revenues from Contracts with Customers

Tecnoed and Tecsur, our energy services companies in South America, generate revenues from the retail sale of electric materials and providing electric construction and infrastructure services to their customers.

TdM is a natural gas-fired power plant that generates revenues from selling electricity and/or resource adequacy to the California ISO and to governmental, public utility and wholesale power marketing entities, as the power is delivered at the interconnection point.

Remaining Performance Obligations

We do not disclose information about remaining performance obligations for (a) contracts with an original expected length of one year or less, (b) revenues recognized at the amount at which we have the right to invoice for services performed, or (c) variable consideration allocated to wholly unsatisfied performance obligations.

For contracts greater than one year, at December 31, 2018, we expect to recognize revenue related to the fixed fee component of the consideration as shown below. Sempra Energy's remaining performance obligations primarily relate to capacity agreements for natural gas storage and transportation at Sempra Mexico. SoCalGas did not have any remaining performance obligations at December 31, 2018.

REMAINING PERFORMANCE OBLIGATIONS⁽¹⁾

(Dollars in millions)

	Sempra Energy Consolidated	SDG&E
2019	\$ 540	\$ 3
2020	534	3
2021	529	3
2022	528	3
2023	516	3
Thereafter	2,813	52
Total revenues to be recognized	\$ 5,460	\$ 67

⁽¹⁾ Excludes intercompany transactions.

Contract Balances from Revenues from Contracts with Customers

From time to time, we receive payments in advance of satisfying the performance obligations associated with customer contracts. We defer such revenues as contract liabilities and recognize them in earnings as the performance obligations are satisfied.

Activities within Sempra Energy's contract liabilities are presented below. There were no contract liability activities at SDG&E or SoCalGas for the year ended December 31, 2018.

CONTRACT LIABILITIES

(Dollars in millions)

Opening balance, January 1, 2018	\$	—
Adoption of ASC 606 adjustment		(68)
Revenue from performance obligations satisfied during reporting period		31
Payments received in advance		(39)
Closing balance, December 31, 2018 ⁽¹⁾	\$	(76)

⁽¹⁾ Includes \$6 million in Other Current Liabilities, a negligible amount in Liabilities Held for Sale and \$70 million in Deferred Credits and Other on the Sempra Energy Consolidated Balance Sheet.

Receivables from Revenues from Contracts with Customers

The table below shows receivable balances associated with revenues from contracts with customers on our Consolidated Balance Sheets.

RECEIVABLES FROM REVENUES FROM CONTRACTS WITH CUSTOMERS				
<i>(Dollars in millions)</i>				
	December 31, 2018		January 1, 2018	
Sempra Energy Consolidated:				
Accounts receivable – trade, net	\$	1,333	\$	1,194
Accounts receivable – other, net		11		10
Due from unconsolidated affiliates – current ⁽¹⁾		4		8
Assets held for sale		6		—
Total	\$	1,354	\$	1,212
SDG&E:				
Accounts receivable – trade, net	\$	368	\$	362
Accounts receivable – other, net		6		3
Due from unconsolidated affiliates – current ⁽¹⁾		3		3
Total	\$	377	\$	368
SoCalGas:				
Accounts receivable – trade, net	\$	634	\$	517
Accounts receivable – other, net		5		7
Total	\$	639	\$	524

⁽¹⁾ Amount is presented net of amounts due to unconsolidated affiliates on the Consolidated Balance Sheets, when right of offset exists.

REVENUES FROM SOURCES OTHER THAN CONTRACTS WITH CUSTOMERS

Certain of our revenues are derived from sources other than contracts with customers and are accounted for under other accounting standards outside the scope of ASC 606.

Utilities Regulatory Revenues

Alternative Revenue Programs

We recognize revenues from alternative revenue programs when the regulator-specified conditions for recognition have been met and adjust these revenues as they are recovered or refunded through future utility service.

Decoupled revenues. As discussed earlier, the regulatory framework requires the California Utilities to recover authorized revenue based on estimated annual demand forecasts approved in regular proceedings before the CPUC. However, actual demand for electricity and natural gas will generally vary from CPUC-approved forecasted demand due to the impacts from weather volatility, energy efficiency programs, rooftop solar and other factors affecting consumption. The CPUC regulatory framework provides for the California Utilities to use a “decoupling” mechanism, which allows the California Utilities to record revenue shortfalls or excess revenues resulting from any difference between actual and forecasted demand to be recovered or refunded in authorized revenue in a subsequent period based on the nature of the account.

Incentive mechanisms. The CPUC applies performance-based measures and incentive mechanisms to all California IOUs, under which the California Utilities have earnings potential above authorized base margins if they achieve or exceed specific performance and operating goals. Generally, for performance-based awards, if performance is above or below specific benchmarks, the utility is eligible for financial awards or subject to financial penalties.

Incentive awards are included in revenues when we receive required CPUC approval of the award, the timing of which may not be consistent from year to year. We would record penalties for results below the specified benchmarks against revenues when we believe it is probable that the CPUC would assess a penalty.

Other Cost-Based Regulatory Recovery

The CPUC authorizes the California Utilities to collect revenue requirements for costs that they have been authorized to recover from customers, including the costs to purchase electricity and natural gas; costs associated with administering public purpose, demand response, and customer energy efficiency programs; and other programmatic activities authorized as part of the GRC or

separately from the GRC. Actual costs are recovered as the commodity or service is delivered or, to the extent actual amounts vary from forecasts, generally recovered or refunded within a subsequent period based on the nature of the account through a balancing account mechanism. In general, the revenue recognition criteria for pass-through costs billed to customers are met at the time the costs are incurred.

Because SDG&E's and SoCalGas' cost of electricity and/or natural gas is substantially recovered in rates through a balancing account mechanism, changes in these costs are reflected in the changes in revenues, and therefore do not impact earnings.

The CPUC authorizes balancing accounts for certain programmatic activities. Amounts billed to customers, if any, are recorded in these accounts, as well as actual O&M and applicable capital-related costs (such as depreciation, taxes and ROE). Differences between actual and authorized expenditures are tracked and may be recovered or refunded within a GRC cycle or as part of a subsequent GRC request. Examples of these types of programs include, but are not limited to, gas distribution, gas transmission, and gas storage integrity management. The CPUC may impose various review procedures before authorizing recovery or refund for programs authorized separately from the GRC, including limitations on the total cost of the program, revenue requirement limits or reviews of costs for reasonableness. These procedures could result in disallowances of recovery from ratepayers. An example of a program with reasonableness review procedures is PSEP.

We discuss balancing accounts and their effects further in Note 4.

Other Revenues

Sempra LNG & Midstream has an agreement to supply LNG to Sempra Mexico's ECA LNG terminal. Although the LNG sale and purchase agreement specifies a number of cargoes to be delivered annually, actual cargoes delivered by the supplier have traditionally been significantly lower than the maximum specified under the agreement. As a result, Sempra LNG & Midstream is contractually required to make monthly indemnity payments to Sempra Mexico for failure to deliver the contracted LNG.

Sempra Mexico generates lease revenues from operating lease agreements with PEMEX for the use of natural gas and ethane pipelines and LPG storage facilities. Certain PPAs at Sempra Renewables were also accounted for as operating leases prior to December 2018. Subsequent to the sale of its solar assets in December 2018, Sempra Renewables has one operating lease remaining, with a term of 15 years.

Sempra LNG & Midstream recognizes other revenues from:

- fees related to contractual counterparty obligations for non-delivery of LNG cargoes, as described above.
- sales of electricity and natural gas under short-term and long-term contracts and into the spot market and other competitive markets. Revenues include the net realized gains and losses on physical and derivative settlements and net unrealized gains and losses from the change in fair values of the derivatives.

NOTE 4. REGULATORY MATTERS

REGULATORY ASSETS AND LIABILITIES

We show the details of regulatory assets and liabilities in the following table and discuss them below.

REGULATORY ASSETS (LIABILITIES) <i>(Dollars in millions)</i>	December 31,	
	2018	2017
SDG&E:		
Fixed-price contracts and other derivatives	\$ (150)	\$ 96
Deferred income taxes refundable in rates	(236)	(281)
Pension and other postretirement benefit plan obligations	186	153
Removal obligations	(1,848)	(1,846)
Unamortized loss on reacquired debt	7	9
Environmental costs	28	29
Sunrise Powerlink fire mitigation	120	119
Regulatory balancing accounts ⁽¹⁾		
Commodity – electric	(8)	82
Gas transportation	45	22
Safety and reliability	70	48
Public purpose programs	(62)	(70)
Other balancing accounts	145	233
Other regulatory liabilities, net ⁽²⁾	(177)	(70)
Total SDG&E	(1,880)	(1,476)
SoCalGas:		
Pension and other postretirement benefit plan obligations	470	513
Employee benefit costs	49	45
Removal obligations	(833)	(924)
Deferred income taxes refundable in rates	(336)	(437)
Unamortized loss on reacquired debt	7	8
Environmental costs	28	22
Workers' compensation	9	12
Regulatory balancing accounts ⁽¹⁾		
Commodity – gas, including transportation	196	151
Safety and reliability	332	266
Public purpose programs	(325)	(274)
Other balancing accounts	(68)	(114)
Other regulatory liabilities, net ⁽²⁾	(130)	(64)
Total SoCalGas	(601)	(796)
Sempra Mexico:		
Deferred income taxes recoverable in rates	81	83
Other regulatory assets	6	—
Total Sempra Energy Consolidated	\$ (2,394)	\$ (2,189)

⁽¹⁾ At December 31, 2018 and 2017, the noncurrent portion of regulatory balancing accounts – net undercollected for SDG&E was \$78 million and \$63 million, respectively. At December 31, 2018 and 2017, the noncurrent portion of regulatory balancing accounts – net undercollected for SoCalGas was \$185 million and \$118 million, respectively.

⁽²⁾ Includes regulatory assets earning a rate of return.

In the table above:

- Regulatory assets arising from fixed-price contracts and other derivatives are offset by corresponding liabilities arising from purchased power and natural gas commodity and transportation contracts. The regulatory asset is increased/decreased based on changes in the fair market value of the contracts. It is also reduced as payments are made for commodities and services under these contracts. We discuss fixed-price contracts and other derivatives further in Note 11.

- Deferred income taxes refundable/recoverable in rates are based on current regulatory ratemaking and income tax laws. SDG&E, SoCalGas and Sempra Mexico expect to refund/recover net regulatory liabilities/assets related to deferred income taxes over the lives of the assets that give rise to the related accumulated deferred income tax balances. Regulatory assets include certain income tax benefits associated with flow-through repair allowance deductions, which we discuss further below.
- Regulatory assets/liabilities related to pension and other postretirement benefit plan obligations are offset by corresponding liabilities/assets and are being recovered in rates as the plans are funded.
- The regulatory asset related to employee benefit costs represents our liability associated with long-term disability insurance that will be recovered from customers in future rates as expenditures are made.
- Regulatory liabilities from removal obligations represent cumulative amounts collected in rates for future asset removal costs in excess of cumulative amounts incurred (or paid).
- Regulatory assets related to unamortized loss on reacquired debt are recovered over the remaining amortization periods of the losses on reacquired debt. These periods range from 1 year to 9 years for SDG&E and from 3 years to 7 years for SoCalGas.
- Regulatory assets related to environmental costs represent the portion of our environmental liability recognized at the end of the period in excess of the amount that has been recovered through rates charged to customers. We expect this amount to be recovered in future rates as expenditures are made. We discuss environmental issues further in Note 16.
- The regulatory asset related to Sunrise Powerlink fire mitigation is offset by a corresponding liability for the funding of a trust to cover the mitigation costs. SDG&E expects to recover the regulatory asset in rates as the trust is funded over a remaining 51-year period. We discuss the trust further in Note 16.
- The regulatory asset related to workers' compensation represents accrued costs for future claims that will be recovered from customers in future rates as expenditures are made.
- Over- and undercollected regulatory balancing accounts reflect the difference between customer billings and recorded or CPUC-authorized costs, including commodity costs. Depreciation and return on rate base may also be included in certain accounts. Amounts in the balancing accounts are recoverable (receivable) or refundable (payable) in future rates, subject to CPUC approval. Absent balancing account treatment, variations in covered costs, such as the cost of fuel supply and certain O&M costs, from amounts approved by the CPUC would increase volatility in utility earnings. Balancing account treatment eliminates the volatility in earnings that would otherwise result from variances in the covered costs compared to the authorized amounts.

Amortization expense on regulatory assets for the years ended December 31, 2018, 2017 and 2016 was \$5 million, \$50 million and \$65 million, respectively, at Sempra Energy Consolidated, \$2 million, \$49 million and \$63 million, respectively, at SDG&E, and \$3 million, \$1 million and \$2 million, respectively, at SoCalGas.

CALIFORNIA UTILITIES

CPUC General Rate Case

The CPUC uses a GRC proceeding to set sufficient rates to allow the California Utilities to recover their reasonable cost of O&M and to provide the opportunity to realize their authorized rates of return on their investment.

2019 General Rate Case

On October 6, 2017, SDG&E and SoCalGas filed their 2019 GRC applications requesting CPUC approval of test year revenue requirements for 2019 and attrition year adjustments for 2020 through 2022. SDG&E and SoCalGas are seeking revenue requirements for 2019 of \$2.203 billion and \$2.937 billion, respectively, which is an increase of \$221 million and \$481 million over their respective 2018 revenue requirements (the 2019 proposed and 2018 actual revenue requirements reflect the impact of various updates made during the course of the proceeding). The California Utilities are proposing post-test year revenue requirement annual attrition percentages that are estimated to result in annual increases of approximately 5 percent to 7 percent at SDG&E and approximately 6 percent to 8 percent at SoCalGas. The original GRC applications filed in October 2017 did not reflect the impact of the TCJA, which we discuss below in "2016 General Rate Case" and in Note 8. In April 2018, SDG&E and SoCalGas updated their applications to reflect the impact of the TCJA and filed a joint proposal to address the impacts. The TCJA impact to SDG&E is a reduction of approximately \$58 million to its 2019 test year revenue requirement; however, SDG&E's 2019 requested revenue requirement is unchanged as we evaluate potentially higher costs associated with mitigating wildfire risks. The TCJA impact to SoCalGas' 2019 requested revenue requirement is a reduction of approximately \$58 million, which is reflected in its updated request.

During the course of the proceeding, Cal PA recommended 2019 revenue requirements of \$1.918 billion and \$2.695 billion for SDG&E and SoCalGas, respectively, which is a net decrease of \$64 million for SDG&E and a net increase of \$239 million for SoCalGas compared to the 2018 revenue requirements. Cal PA proposes a three-year annual attrition percentage of 4 percent for

SDG&E and a range of 4 percent to 5 percent for SoCalGas. Cal PA recommends addressing SDG&E's potential ownership of OMEC in a separate proceeding. As a result, Cal PA's proposed 2019 revenue requirement does not include the estimated \$68 million associated with owning and operating the generating facility. SDG&E's potential acquisition of OMEC is subject to a CPUC-approved agreement under which the current owner of the facility can exercise a put option at a designated price. As we discuss in Note 1, SDG&E and OMEC LLC signed a resource adequacy capacity agreement in October 2018, which, if approved by the CPUC on a final and non-appealable basis before the expiration of the put option on April 1, 2019, would result in OMEC LLC waiving its right to exercise the put option. TURN and other intervenors oppose various components of our revenue requirement requests in the 2019 GRC applications.

As part of the 2019 GRC, the CPUC reviewed the California Utilities' interim accountability reports, which compare the authorized and actual spending for certain safety-related activities for 2014 through 2016. In June 2017, SDG&E and SoCalGas filed their first interim accountability reports comparing authorized and actual spending in 2014 and 2015 for certain safety-related activities. Similar data for 2016 was provided with the 2019 GRC application filings in a second interim accountability report filed in October 2017. The stated purpose of the initial interim accountability reports is to provide data and metrics for key safety and risk mitigation areas that will be considered in the 2019 GRC. In October 2018, the CPUC confirmed that the 2014, 2015 and 2016 interim accountability reports were compliant with the requirements and also recommended improvements for subsequent reports.

The results of the rate case may materially and adversely differ from what is contained in the GRC applications.

We expect a preliminary decision from the CPUC in the first half of 2019.

Risk Assessment Mitigation Phase Reporting and Impact on the 2019 GRC Application Filings

In December 2014, the CPUC issued a decision incorporating a risk-based decision-making framework into all future GRC application filings for major natural gas and electric utilities in California. In November 2016, as part of the new framework, SDG&E and SoCalGas filed their first RAMP report presenting a comprehensive assessment of their key safety risks and proposed activities for mitigating such risks. The report details these key safety risks, which include critical operational issues such as natural gas pipeline safety and wildfire safety, and addresses their classification, scoring, mitigation, alternatives, safety culture, quantitative analysis, data collection and lessons learned. SDG&E and SoCalGas included funding requests in their respective 2019 GRC filings for proposed projects or activities outlined in their RAMP reports. In April 2018, the CPUC granted SDG&E's and SoCalGas' motion to close the proceeding as all RAMP procedures had been completed. In December 2018, the CPUC approved a joint settlement agreement that establishes the required elements for the risk and mitigation analysis to be used in RAMP and GRC proceedings with minor modifications.

Senate Bill 549. SB 549 was signed into law in September 2017 and became effective January 1, 2018. The bill requires that SDG&E and SoCalGas (as electric and gas corporations) annually notify the CPUC when revenue authorized by the CPUC for maintenance, safety or reliability is redirected to other purposes. Beginning in December 2018, the CPUC began incorporating and will continue to incorporate this requirement into the accountability reports.

2016 General Rate Case

In June 2016, the CPUC issued a final decision in the 2016 GRC. The 2016 GRC FD adopted a 2016 revenue requirement of \$1.791 billion for SDG&E and \$2.204 billion for SoCalGas. The 2016 GRC FD was effective retroactive to January 1, 2016, and the California Utilities recorded the retroactive impacts in the second quarter of 2016. The 2016 GRC FD also required certain refunds to be paid to customers and establishes a two-way income tax expense memorandum account, each discussed below.

The 2016 GRC FD results in certain accounting impacts associated with flow-through income tax repairs deductions. In general, the 2016 GRC FD considers that the income tax benefits obtained from income tax repairs deductions exceeded amounts forecasted by the California Utilities from 2011 to 2015, and that they were attributed to shareholders during that time. The 2016 GRC FD reallocated the economic benefit of this tax deduction forecasting difference to ratepayers. Accordingly, revenues corresponding to income tax repair deductions that exceeded forecasted amounts were ordered to be refunded to customers. Pursuant to this refund requirement, in 2016, SDG&E and SoCalGas recorded regulatory liabilities for these amounts, resulting in reductions to revenue of \$52 million (\$31 million after tax) and \$83 million (\$49 million after tax), respectively.

The 2016 GRC FD required SDG&E and SoCalGas to each establish a two-way income tax expense memorandum account to track certain revenue variances resulting from certain differences between the income tax expense forecasted in the GRC and the income tax expense incurred from 2016 through 2018. The variances to be tracked include tax expense differences relating to:

- net revenue changes;
- mandatory tax law, tax accounting, tax procedural, or tax policy changes; and

- elective tax law, tax accounting, tax procedural, or tax policy changes.

At December 31, 2018, the recorded regulatory liability associated with these tracked amounts totaled \$89 million and \$94 million for SDG&E and SoCalGas, respectively. The recorded liability is primarily related to lower income tax expense incurred than was forecasted in the GRC relating to tax repairs deductions, self-developed software deductions and certain book-over-tax depreciation. The tracking accounts will remain open until the CPUC decides to close the accounts, which we expect will be reviewed in the 2019 GRC proceedings.

The 2016 GRC FD revenue requirement was authorized using a federal income tax rate of 35 percent. As a result of the TCJA, the federal income tax rate became 21 percent effective January 1, 2018. Since SDG&E and SoCalGas continue to collect authorized revenues based on a 35 percent tax rate, SDG&E and SoCalGas are recording revenue deferrals, aligned with authorized seasonality factors, that reflect the estimated reduction in the revenue requirement. As of December 31, 2018, SDG&E and SoCalGas recorded regulatory liabilities of \$75 million and \$68 million, respectively, in anticipation of amounts that will benefit customers in future rates. SDG&E also recorded a \$67 million regulatory liability at December 31, 2018, relating to its FERC jurisdictional rates, in anticipation of amounts that will benefit customers in future rates for the decrease in the federal income tax rate.

CPUC Cost of Capital

In September 2017, SDG&E and SoCalGas filed advice letters to update their cost of capital for the actual cost of long-term debt through August 2017 and forecasted cost through 2018. SDG&E and SoCalGas did not file for changes to preferred stock costs, because no issuances of preferred stock through 2018 were anticipated.

In October 2017, the CPUC approved the embedded cost of debt presented in advice letters filed by SDG&E and SoCalGas, resulting in a revised return on rate base for SDG&E of 7.55 percent and for SoCalGas of 7.34 percent, effective January 1, 2018, as depicted in the table below:

AUTHORIZED COST OF CAPITAL AND RATE STRUCTURE – CPUC						
SDG&E				SoCalGas		
Authorized weighting	Return on rate base	Weighted return on rate base		Authorized weighting	Return on rate base	Weighted return on rate base
45.25 %	4.59 %	2.08 %	Long-Term Debt	45.60 %	4.33 %	1.97 %
2.75	6.22	0.17	Preferred Stock	2.40	6.00	0.14
52.00	10.20	5.30	Common Equity	52.00	10.05	5.23
100.00 %		7.55 %		100.00 %		7.34 %

The changes to the embedded cost of debt and return on rate base resulting from the updates included in the filed advice letters are summarized below:

CHANGES TO THE EMBEDDED COST OF DEBT				
	SDG&E		SoCalGas	
	Cost of debt	Return on rate base	Cost of debt	Return on rate base
Previously	5.00 %	7.79 %	5.77 %	8.02 %
Authorized, effective January 1, 2018	4.59 %	7.55 %	4.33 %	7.34 %
Differences	(41) bps	(24) bps	(144) bps	(68) bps

The costs of long-term debt and the ROEs shown above will remain in effect through December 31, 2019. The cost of capital changes will also apply to capital expenditures in 2019 for incremental projects not funded through the GRC revenue requirement. SDG&E and SoCalGas are required to file cost of capital applications by the end of April 2019 for a January 1, 2020 implementation date. The automatic CCM did not operate in 2018 and will be evaluated in the 2019 cost of capital proceeding.

SDG&E

FERC Rate Matters and Cost of Capital

SDG&E files separately with the FERC for its authorized ROE on FERC-regulated electric transmission operations and assets.

SDG&E's current estimated FERC return on rate base under the TO4 formula rate request filing is 7.51 percent based on its capital structure as follows:

SDG&E COST OF CAPITAL AND RATE STRUCTURE – FERC			
	Weighting	Return on rate base	Weighted return on rate base
Long-Term Debt	43.44 %	4.21 %	1.83 %
Common Equity	56.56	10.05	5.68
	100.00 %		7.51 %

FERC Formulaic Rate Filing

SDG&E submitted its TO5 filing with the FERC in October 2018 to be effective January 1, 2019, subject to refund. This proceeding will establish the revenue requirement, including rate of return, for SDG&E's FERC-regulated electric transmission operations and assets. SDG&E's TO5 filing proposes to continue most aspects of its existing FERC-authorized formula rate. SDG&E's TO5 filing is requesting: (1) rates to be determined by a base period of historical costs and a forecast of capital investments, (2) a true-up period, which is similar to a balancing account that is designed to provide SDG&E earnings of no more and no less than its actual cost of service including its authorized return on investment, (3) a true-up of accumulated deferred income tax and (4) a refund of amounts collected in rates in 2018 that presumed a 35 percent federal income tax rate. The net impact of our TO5 filing is a revenue requirement of \$911 million, an increase in rates of \$88 million, or 10.6 percent, above 2018's revenue requirement.

This TO5 proceeding will also set SDG&E's authorized FERC ROE. SDG&E's current authorized FERC ROE is 10.05 percent, and SDG&E's TO5 filing proposes a FERC ROE of 11.2 percent. On December 31, 2018, the FERC issued its order accepting and suspending the TO5 filing and establishing hearing and settlement judge procedures. In the order, the FERC suspended the TO5 filing for five months, during which the existing TO4 rates will remain in effect. After the suspension period ends, the proposed TO5 rates will take effect, subject to refund and the outcome of the hearing and settlement judge procedures. A FERC settlement judge has been appointed, and we expect settlement conferences to begin in the first quarter of 2019.

SEMPRA SOUTH AMERICAN UTILITIES

Luz del Sur serves primarily regulated customers in Peru and revenues are based on rates set by the OSINERGMIN. The rates are reviewed and adjusted every four years. OSINERGMIN's final distribution rate-setting resolution for the 2018-2022 period was published on October 16, 2018 and went into effect on November 1, 2018. The resolution decreases the rates Luz del Sur can charge its regulated customers, resulting in a modest reduction in regulated revenues per annum. Luz del Sur submitted a petition for reconsideration to the regulator in November 2018 and obtained a favorable response in late December 2018 that reduces the negative impact to rates from the resolution published on October 16, 2018. The adjustment is retroactive to November 1, 2018.

Chilquinta Energía serves regulated and unregulated customers in Chile. Distribution revenues and rates are reviewed and set by the CNE every four years; the most recent review process was completed in November 2016, covering the period from November 2016 through October 2020. On September 28, 2018, a distribution interim rate case, which included an adjustment to rates, was approved to allow adequate recovery of the incremental investment, including the deployment of smart meters to all customers, necessary to comply with the new distribution standards set by the CNE in December 2017. These interim adjusted rates will be applicable from September 28, 2018 through October 2020.

Chilquinta Energía's most recent review process for zonal transmission rates was completed in September 2017. The final decree approving the rates was published on October 5, 2018. The authorized transmission rates will cover the period from January 2018 through December 2019.

As we discuss in Note 5, Chilquinta Energía acquired CTNG in December 2018. CTNG owns both national and zonal transmission assets. CTNG's most recent review process for national transmission rates was completed in 2015 and covers the

period from January 2016 to December 2019. The review process for zonal transmission rates was completed in 2017 and covers the periods from January 2018 to December 2019.

SEMPRA MEXICO

On July 23, 2018, the CRE adjusted Ecogas' natural gas distribution rates charged to end-users in 2014 through 2016. Ecogas recorded a regulatory asset of \$7 million for this tariff adjustment, which is recoverable in rates effective September 1, 2018 through December 31, 2020.

NOTE 5. ACQUISITION AND DIVESTITURE ACTIVITY

We consolidate assets acquired and liabilities assumed as of the purchase date and include earnings from acquisitions in consolidated earnings after the purchase date.

ACQUISITIONS

SEMPRA TEXAS UTILITY

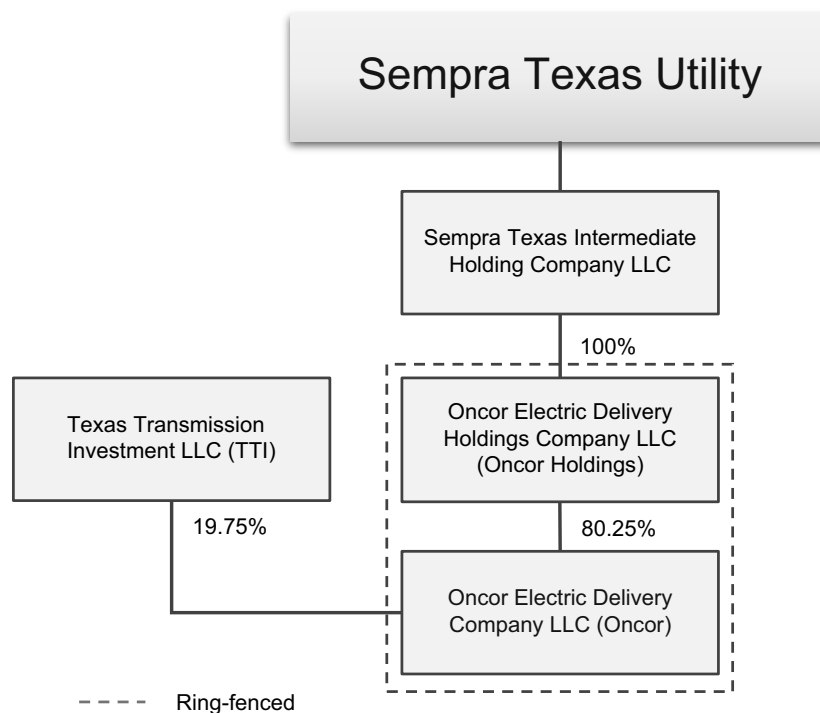
After satisfying all conditions precedent, including final approval from the PUCT, on March 9, 2018, Sempra Energy completed the acquisition of an indirect, 100-percent interest in Oncor Holdings, which owned 80.03 percent of Oncor, and other EFH assets and liabilities unrelated to Oncor, pursuant to the Merger Agreement with EFH. Oncor is a regulated electric transmission and distribution business that operates the largest transmission and distribution system in Texas. This acquisition expanded our regulated earnings base, and may serve as a platform for future growth in the Texas energy market.

Under the Merger Agreement, we paid Merger Consideration of \$9.45 billion in cash and an additional \$31 million representing an adjustment for dividends and payments pursuant to a tax sharing agreement with Oncor and Oncor Holdings. Also on March 9, 2018, in a separate transaction, Sempra Energy, through its interest in Oncor Holdings, acquired an additional 0.22 percent of the outstanding membership interests in Oncor from OMI for approximately \$26 million in cash, bringing Sempra Energy's indirect ownership in Oncor to 80.25 percent. TTI, an investment vehicle indirectly owned by third parties unaffiliated with Oncor Holdings or Sempra Energy, continues to own 19.75 percent of Oncor's outstanding membership interests.

Pursuant to the Merger Agreement, the reorganized EFH (renamed Sempra Texas Holdings Corp.) merged with an indirect subsidiary of Sempra Energy, with Sempra Texas Holdings Corp. continuing as the surviving company and an indirect, wholly owned subsidiary of Sempra Energy. Sempra Texas Holdings Corp. wholly owns EFIH (renamed Sempra Texas Intermediate Holding Company LLC), which holds our 100-percent interest in Oncor Holdings. Sempra Texas Intermediate Holding Company LLC is included in our newly formed Sempra Texas Utility reportable segment. Other assets and liabilities unrelated to Oncor that were acquired with Sempra Texas Holdings Corp. have been subsumed into our parent organization, Parent and other.

Due to ring-fencing measures, existing governance mechanisms and commitments in effect following the Merger, we do not have the power to direct the significant activities of Oncor Holdings and Oncor. Consequently, we account for our 100-percent ownership interest in Oncor Holdings as an equity method investment. See Note 6 for additional information about our equity method investment in Oncor Holdings and related ring-fencing measures.

The Sempra Texas Utility reportable segment comprises:



The foregoing is a simplified ownership structure that does not show all the subsidiaries of, or other equity interests owned by, these entities.

In anticipation of the Merger, in January 2018, we completed registered public offerings of our common stock (including shares offered pursuant to forward sale agreements), series A preferred stock and long-term debt, as we discuss in Notes 7, 13 and 14. These offerings provided total initial net proceeds of approximately \$7.0 billion for partial funding of the Merger Consideration, of which approximately \$800 million was used to pay down commercial paper, pending the closing of the Merger.

On March 8, 2018, to fund a portion of the Merger Consideration, we settled approximately \$900 million (net of underwriting discounts of \$16 million) of forward sales under the forward sale agreements entered into in connection with the public offering of common stock in January 2018 by delivery of 8,556,630 shares of newly issued Sempra Energy common stock, as we discuss in Note 14. We raised the remaining portion of the Merger Consideration through issuances of approximately \$2.6 billion in commercial paper with a weighted-average maturity of 47 days and a weighted-average interest rate of 2.2 percent per annum.

The total purchase price paid was comprised of the following:

- \$9,450 million of Merger Consideration;
- \$31 million adjustment for dividends and payments pursuant to a tax sharing agreement with Oncor and Oncor Holdings;
- \$26 million paid in a separate transaction to acquire an additional 0.22 percent of the outstanding membership interests in Oncor from OMI; and
- \$59 million of transaction costs included in the basis of our investment in Oncor Holdings.

We accounted for the Merger as an asset acquisition, as the equity method investment in Oncor Holdings represents substantially all of the fair value of the gross assets acquired. The following table sets forth the allocation of the total purchase price paid to the identifiable assets acquired and liabilities assumed.

PURCHASE PRICE ALLOCATION	
<i>(Dollars in millions)</i>	
At March 9, 2018 ⁽¹⁾	
Assets acquired:	
Accounts receivable – other, net	\$ 1
Due from unconsolidated affiliates	46
Investment in Oncor Holdings	9,227
Deferred income tax assets	287
Other noncurrent assets	109
Total assets acquired	<u>9,670</u>
Liabilities assumed:	
Other current liabilities	23
Pension and other postretirement benefit plan obligations	21
Deferred credits and other	58
Total liabilities assumed	<u>102</u>
Net assets acquired	<u>\$ 9,568</u>
Total purchase price paid	<u>\$ 9,568</u>

⁽¹⁾ In the fourth quarter of 2018, we received additional information regarding deferred income taxes related to the resolution of claims in EFH's emergence from bankruptcy as of the acquisition date. As a result, we recorded an adjustment to increase our investment in Oncor Holdings by \$64 million, decrease deferred income tax assets by \$66 million and decrease deferred credits and other liabilities by \$2 million. Also in the fourth quarter of 2018, we recorded \$2 million of additional purchase price paid related to additional transaction costs.

The fair value of the equity method investment in Oncor Holdings is primarily attributable to Oncor's business. Therefore, we considered the underlying assets and liabilities of Oncor when determining the fair value of our equity method investment. As a regulated entity, Oncor's rates are set and approved by the PUCT, and are designed to recover the cost of providing service and the opportunity to earn a reasonable return on its investments. Accordingly, Oncor applies the guidance under the provisions of U.S. GAAP governing rate-regulated operations. Under U.S. GAAP, regulation is viewed as being a characteristic (restriction) of a regulated entity's assets and liabilities, and the impact of regulation is considered a fundamental input to measuring the fair value of Oncor's assets and liabilities. Under this premise, we concluded that the carrying values of all assets and liabilities recoverable through rates are representative of their fair values.

SEMPRA SOUTH AMERICAN UTILITIES

Compañía Transmisora del Norte Grande S.A.

Background and Financing. On December 18, 2018, Chilquinta Energía acquired a 100-percent interest in CTNG through a sales and purchase agreement with AES Gener S.A. and its subsidiary Sociedad Eléctrica Angamos S.A. CTNG owns regulated transmission assets in the Valparaíso, Metropolitana and Antofagasta regions of Chile. The fully operating transmission assets include a 114-mile, 110-kV single-circuit transmission line, an 82-mile, 220-kV double-circuit transmission line, substations and other transmission assets. CTNG's regulated revenues are based on tariffs that are set by the CNE and are reviewed by the CNE every four years. This business acquisition aligns with Chilquinta Energía's business model of owning and operating regulated transmission and distribution assets. We completed the acquisition for a purchase price of \$226 million. We paid the purchase price of \$208 million (net of \$18 million cash acquired) with available cash on hand at Sempra South American Utilities.

Purchase Price Allocation. We accounted for this business combination using the acquisition method of accounting whereby the total fair value of the business acquired is allocated to identifiable assets acquired and liabilities assumed based on their respective fair values, with any excess recognized as goodwill at the Sempra South American Utilities reportable segment. None of the goodwill is expected to be deductible in Chile or in the U.S. for income tax purposes.

The following table summarizes the fair value of the CTNG business combination and the preliminary purchase price allocation of the assets acquired and liabilities assumed at the date of acquisition:

PRELIMINARY PURCHASE PRICE ALLOCATION

(Dollars in millions)

	At December 18, 2018
Assets acquired:	
Cash and cash equivalents	\$ 18
Other assets	5
Other intangible assets	46
Property, plant and equipment	162
Total assets acquired	<u>231</u>
Liabilities assumed:	
Other current liabilities	1
Deferred income taxes	42
Total liabilities assumed	<u>43</u>
Total identifiable net assets acquired	188
Goodwill	38
Total purchase price paid	<u>\$ 226</u>

At December 31, 2018, the purchase price allocation was preliminary and subject to completion. Adjustments to the current fair value estimates in the above table may occur as the process conducted for various valuations and assessments is finalized, primarily related to deferred income taxes. During the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill.

Valuation of CTNG's Assets and Liabilities. The fair values of the tangible and intangible assets acquired and liabilities assumed were recognized based on their preliminary values at the acquisition date. Significant inputs used to measure the fair values of the acquired PP&E and intangible assets are as follows:

- PP&E - We applied an income approach using market-based discounted cash flows. We used discounted free cash flows on revenues established by the most recent regulatory rate case, which was determined to reflect the fair value of PP&E.
- Intangible assets - CTNG holds concession permits that allow it to operate transmission lines and substations into perpetuity. We applied an income approach using market-based discounted cash flows. To estimate the fair value of the concession permits, we estimated the fair value of each transmission line and substation business enterprise assuming that they will operate into perpetuity. We then subtracted the corresponding fair value of the PP&E from each transmission line and substation business enterprise value to estimate the value attributable to the concession permits.

Additionally, we recognized deferred income taxes on CTNG's existing NOs and for the difference between fair values and tax bases of the net assets acquired using the Chilean statutory tax rate.

For substantially all other assets and liabilities, we determined that historical carrying value approximates fair value due to their short-term nature.

Impact on Operating Results. We incurred negligible acquisition costs in the year ended December 31, 2018, which are included in O&M on the Sempra Energy Consolidated Statement of Operations.

For the year ended December 31, 2018, the Sempra Energy Consolidated Statement of Operations includes \$1 million of revenues and negligible earnings from CTNG since the December 18, 2018 date of acquisition.

Unaudited Pro Forma Information

The following table represents unaudited pro forma information for the years ended December 31, 2018 and 2017, combining the historical results of operations of Sempra Energy and CTNG as though the acquisition occurred on January 1, 2017. The pro forma information is not necessarily indicative of results that would have been achieved had the business been combined during the periods presented or the results that we would expect going forward.

UNAUDITED PRO FORMA INFORMATION – SEMPRA ENERGY CONSOLIDATED*(Dollars in millions)*

	Years ended December 31,	
	2018	2017
Total revenues	\$ 11,703	\$ 11,224
Net income	1,130	356
Earnings attributable to common shares	928	261

The unaudited pro forma information above assumes the loss of interest income on cash on hand used to fund the acquisition in all periods presented. Also, as a result of discrete historical financial information not being available for 2017, CTNG's income statement for 2017 was estimated using the 2018 income statement, primarily adjusted for expected changes in inflation and regulatory rates.

SEMPRA MEXICO**2018 Acquisitions***Trafigura Mexico, S.A. de C.V.*

On September 26, 2018, Sempra Mexico acquired a 51-percent interest (with an option to increase its ownership interest to 82.5 percent) in a subsidiary of Trafigura Mexico, S.A. de C.V. that owns certain permits and land where the Manzanillo Terminal will be built. We consolidate this subsidiary and report NCI for the 49-percent ownership interest held by Trafigura Mexico, S.A. de C.V. IEnova intends to invest \$102 million to \$165 million (depending on ownership interest) to develop, construct and operate the Manzanillo Terminal, a marine terminal for the receipt, storage and delivery of refined products located in Colima, Mexico. IEnova and Trafigura Mexico, S.A. de C.V. also entered into a long-term, U.S. dollar-denominated terminal services agreement for 50 percent of the terminal's initial storage capacity of 1.48 million barrels. We expect operations to commence in the fourth quarter of 2020.

Don Diego Solar Netherlands B.V. (formerly known as Fisterra Energy Netherlands II, B.V.)

On February 28, 2018, Sempra Mexico completed the asset acquisition of Don Diego Solar Netherlands B.V., for a purchase price of \$5 million. Substantially all of the fair value of the gross assets acquired is attributable to a self-supply permit that allows generators to compete directly with the CFE's retail tariffs and, thus, have access to PPAs with a competitive pricing position. IEnova intends to invest \$130 million to develop, construct and operate the Don Diego Solar Complex, a 125-MW solar facility in Sonora, Mexico. IEnova entered into a 15-year, U.S. dollar-denominated PPA with various subsidiaries of El Puerto de Liverpool, S.A.B. de C.V., for a portion of the capacity. We expect operations to commence in the second half of 2019.

2017 Acquisition*Ductos y Energéticos del Norte, S. de R.L. de C.V.*

On November 15, 2017, IEnova completed the asset acquisition of PEMEX's 50-percent interest in DEN, a JV that holds a 50-percent interest in the Los Ramones Norte pipeline through TAG, for a purchase price of \$165 million (exclusive of \$18 million of cash and cash equivalents acquired), plus the assumption of \$96 million of short-term debt. This acquisition increased IEnova's ownership interest in DEN through IEnova Pipelines from 50 percent to 100 percent, and increased IEnova's indirect ownership interest in TAG from 25 percent to 50 percent. IEnova Pipelines previously accounted for its 50-percent interest in DEN as an equity method investment. At closing, DEN became a wholly owned, consolidated subsidiary of IEnova Pipelines. DEN will continue to account for its interest in TAG as an equity method investment. This acquisition also included a \$66 million intangible asset that represents a favorable O&M agreement, which has an amortization period of 23 years.

2016 Acquisitions

The following table summarizes the total fair value of the 2016 business combinations at Sempra Mexico, described below, and the final purchase price allocations of the assets acquired and liabilities assumed at the dates of acquisition:

PURCHASE PRICE ALLOCATIONS

(Dollars in millions)

	IEnova Pipelines	Ventika
	At September 26, 2016 ⁽¹⁾	At December 14, 2016 ⁽²⁾
Fair value of business combination:		
Cash consideration (fair value of total consideration)	\$ 1,144	\$ 310
Fair value of equity interest in IEnova Pipelines immediately prior to acquisition	1,144	—
Total fair value of business combination	<u>\$ 2,288</u>	<u>\$ 310</u>
Assets acquired:		
Cash and cash equivalents	\$ 66	\$ —
Restricted cash	—	68
Accounts receivable	39	14
Other current assets	6	1
Other intangible assets	—	154
Deferred income taxes	—	36
Regulatory assets	33	—
Property, plant and equipment	1,248	673
Other noncurrent assets	1	3
Total assets acquired	<u>1,393</u>	<u>949</u>
Liabilities assumed:		
Short-term debt	—	125
Accounts payable	11	1
Due to unconsolidated affiliates	3	—
Current portion of long-term debt	49	7
Fixed-price contracts and other derivatives, current	6	4
Other current liabilities	20	8
Long-term debt	315	478
Asset retirement obligations	5	2
Deferred income taxes	127	120
Fixed-price contracts and other derivatives, noncurrent	19	10
Other noncurrent liabilities	11	—
Total liabilities assumed	<u>566</u>	<u>755</u>
Total identifiable net assets acquired	827	194
Goodwill	1,461	116
Total fair value of business combination	<u>\$ 2,288</u>	<u>\$ 310</u>

⁽¹⁾ During the fourth quarter of 2016, we received additional information regarding IEnova Pipelines' deferred income taxes as of the acquisition date, primarily related to basis differences in IEnova Pipelines' PP&E. As a result, we recorded measurement period adjustments that resulted in a net increase to goodwill of \$86 million, an increase in deferred income tax liabilities of \$119 million and \$33 million of regulatory assets related to deferred income taxes on AFUDC.

⁽²⁾ During the fourth quarter of 2017, we received additional information regarding Ventika's deferred income taxes as of the acquisition date, primarily related to net operating loss carryforwards. As a result, we recorded a measurement period adjustment that resulted in a decrease to goodwill and an increase in deferred income tax assets of \$13 million.

IEnova Pipelines, S. de R.L. de C.V. (formerly known as Gasoductos de Chihuahua, S. de R.L. de C.V., or GdC)

Background and Financing. On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in IEnova Pipelines, which develops and operates energy infrastructure in Mexico, for a purchase price of \$1.144 billion (exclusive of \$66 million of cash and cash equivalents acquired), plus the assumption of \$364 million of long-term debt, increasing IEnova's ownership interest in IEnova Pipelines to 100 percent. IEnova Pipelines became a consolidated subsidiary of IEnova on this date.

Prior to the acquisition date, IEnova owned 50 percent of IEnova Pipelines and accounted for its interest as an equity method investment.

The assets involved in the acquisition included three natural gas pipelines, an ethane pipeline, and a liquid petroleum gas pipeline and associated storage terminal. The transaction excluded the Los Ramones Norte pipeline, in which IEnova continued to hold an indirect 25-percent ownership interest through IEnova Pipelines' interest in DEN until November 2017, as we discuss above.

IEnova paid \$1.078 billion in cash (\$1.144 billion purchase price less \$66 million of cash and cash equivalents acquired), which was funded using interim financing provided by Sempra Global through a \$1.15 billion bridge loan to IEnova. Sempra Global funded the majority of the transaction using commercial paper borrowings. As we discuss in Note 1, in October 2016, IEnova completed a private follow-on offering of its common stock in the U.S. and outside of Mexico and a concurrent public common stock offering in Mexico. IEnova used a portion of the net proceeds from the offerings to fully repay the Sempra Global bridge loan.

Purchase Price Allocation. We accounted for this business combination using the acquisition method of accounting whereby the total fair value of the business acquired is allocated to identifiable assets acquired and liabilities assumed based on their respective fair values, with any excess recognized as goodwill at the Sempra Mexico reportable segment. None of the goodwill is expected to be deductible in Mexico or the U.S. for income tax purposes.

Gain on Remeasurement of Equity Method Investment. In the year ended December 31, 2016, we recorded a pretax gain of \$617 million (\$432 million after-tax) for the excess of the acquisition-date fair value of Sempra Mexico's previously held equity interest in IEnova Pipelines over the carrying value of that interest, included as Remeasurement of Equity Method Investment on the Sempra Energy Consolidated Statement of Operations. We used a market approach to measure the acquisition-date fair value of IEnova's equity interest in IEnova Pipelines immediately prior to the business acquisition. We discuss non-recurring fair value measures and the associated accounting impact of the IEnova Pipelines acquisition in Note 12.

Valuation of IEnova Pipelines' Assets and Liabilities. Based on the nature of the Mexico regulatory environment and the oversight surrounding the establishment and maintenance of rates that IEnova Pipelines charges for services on its assets, IEnova Pipelines applies the guidance under the provisions of U.S. GAAP governing rate-regulated operations. Therefore, when determining the fair value of the acquired assets and liabilities assumed, we considered the effect of regulation on a market participant's view of the highest and best use of the assets, in particular for the fair value of IEnova Pipelines' PP&E. Under U.S. GAAP, regulation is viewed as being a characteristic (restriction) of a regulated entity's PP&E, and the impact of regulation is considered a fundamental input to measuring the fair value of PP&E in a business combination involving a regulated business.

Under this premise, the fair value of the PP&E of a regulated business is generally assumed to be equivalent to carrying value for financial reporting purposes. Management concluded that the carrying value of IEnova Pipelines' PP&E is representative of fair value.

We applied an income approach, specifically the discounted cash flow method, to measure the fair value of debt and derivatives. We valued debt by discounting future debt payments by a market yield, and we valued derivatives by discounting the future interest payments under the fixed and floating rates using current market data.

For substantially all other assets and liabilities, we determined that historical carrying value approximates fair value due to their short-term nature.

Impact on Operating Results. We incurred acquisition costs of \$4 million for the year ended December 31, 2016, which are included in O&M on the Sempra Energy Consolidated Statement of Operations.

For the year ended December 31, 2016, the Sempra Energy Consolidated Statement of Operations includes \$82 million of revenues and \$33 million of earnings (after NCI) from IEnova Pipelines since the September 26, 2016 date of acquisition.

Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V.

Background and Financing. On December 14, 2016, IEnova acquired 100 percent of the equity interests in the Ventika wind power generation facilities for cash consideration of \$310 million and the assumption of \$610 million of existing debt. Ventika is a 252-MW wind farm located in Nuevo Leon, Mexico, that began commercial operations in April 2016. All of Ventika's generation capacity is contracted under 20-year, U.S. dollar-denominated PPAs with five private off-takers. The acquisition was funded using \$50 million of net proceeds from the IEnova equity offerings that we discuss in Note 1, \$250 million of borrowings against Sempra Mexico's revolving credit facility, and \$10 million of available cash at IEnova. The acquisition also included \$68 million of restricted cash that represents funds set aside for servicing debt, operations and other costs pursuant to the long-term debt agreements.

Purchase Price Allocation. We accounted for this business combination using the acquisition method of accounting whereby the total fair value of the business acquired is allocated to identifiable assets acquired and liabilities assumed based on their respective fair values, with any excess recognized as goodwill at the Sempra Mexico reportable segment. None of the goodwill is expected to be deductible in Mexico or in the U.S. for income tax purposes.

Valuation of Ventika's Assets and Liabilities. The fair values of the tangible and intangible assets acquired and liabilities assumed were recognized based on their preliminary values at the acquisition date. Significant inputs used to measure the fair values of the acquired PP&E, intangible asset, debt and derivatives are as follows:

- PP&E – We applied an income approach using market-based discounted cash flows. We used the pricing included in the existing PPAs, which was determined to reflect current market rates in the Mexican renewable energy market.
- Intangible asset – Ventika is the holder of a renewable energy transmission and consumption permit that allows it to transmit its generated power to various locations within Mexico at beneficial rates and reduces the administrative burden to manage transmitting power to off-takers. With recent renewable energy market reforms in Mexico, these transmission and consumption permits are no longer available, resulting in higher tariffs for generators. We applied an income approach based on a cash flow differential approach that measures the fair value of the transmission rights by comparing the operating expenses under the transmission and consumption permit as compared to under the new, higher tariffs. This acquired intangible asset has an amortization period of 19 years, reflecting the remaining life of the transmission and consumption transmission permit at the time of acquisition.
- Debt – Using an income approach, we valued debt by discounting future debt payments by a market yield commensurate with the remaining term of the loans.
- Derivatives – Using an income approach, we valued derivatives by discounting the future interest payments under the fixed and floating rates using current market data.

Additionally, we recognized deferred income taxes on Ventika's existing NOLs and the difference between the fair values and tax bases of the net assets acquired using the Mexican statutory rate.

For substantially all other assets and liabilities, we determined that historical carrying value approximates fair value due to their short-term nature.

Impact on Operating Results. We incurred acquisition costs of \$1 million in the year ended December 31, 2016, which are included in O&M on the Sempra Energy Consolidated Statement of Operations.

For the year ended December 31, 2016, the Sempra Energy Consolidated Statement of Operations includes \$4 million of revenues and \$3 million of earnings (after NCI) from Ventika since the December 14, 2016 date of acquisition.

SEMPRA RENEWABLES

On July 10, 2017, Sempra Renewables paid \$124 million in cash for an asset acquisition of a portfolio of four solar projects located in Fresno County, California, that were under construction. Completed in 2018, the facilities were sold to a subsidiary of Con Ed in December 2018, as we discuss below.

In July 2016, Sempra Renewables acquired a 100-percent interest in a 100-MW wind farm in Huron County, Michigan, with a 15-year PPA, for a total purchase price of \$22 million. Sempra Renewables paid \$18 million in cash on the acquisition date and paid the remaining \$4 million in cash on achievement of certain construction milestones in the fourth quarter of 2016. We placed this wind farm into service in November 2017. This facility is currently included in a plan of sale that we discuss below.

PENDING ACQUISITION

SEMPRA ENERGY

Sempra Texas Utility

On October 18, 2018, Oncor entered into the InfraREIT Merger Agreement, whereby Oncor has agreed to acquire 100 percent of the issued and outstanding shares of InfraREIT and 100 percent of the limited partnership units of its subsidiary, InfraREIT Partners, for approximately \$1,275 million, or \$21 per share and unit, plus approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition. In addition, the transaction includes InfraREIT's outstanding debt, which as of September 30, 2018 was approximately \$945 million. Consummation of the InfraREIT Merger Agreement is subject to the satisfaction of certain closing

conditions, including the substantially concurrent consummation of the transactions contemplated by the Asset Exchange Agreement and Securities Purchase Agreement, discussed below.

On October 18, 2018, Oncor entered into the Asset Exchange Agreement, whereby SDTS has agreed to accept and assume certain assets and liabilities of SU in exchange for certain SDTS assets. As currently contemplated, SDTS would receive certain real property and other assets used in the electric transmission and distribution business in Central, North and West Texas, as well as the equity interests in GS Project Entity, LLC (a wholly owned subsidiary of SU) and SU would receive certain real property and other assets that are near the Texas-Mexico border. Immediately prior to completing the exchange, SDTS would become a wholly owned, indirect subsidiary of InfraREIT Partners. Consummation of the Asset Exchange Agreement is subject to the satisfaction of certain closing conditions, including the substantially concurrent consummation of the transactions contemplated by the Securities Purchase Agreement, discussed below.

On October 18, 2018, Sempra Energy entered into the Securities Purchase Agreement, whereby Sempra Texas Utilities Holdings I, LLC (a wholly owned subsidiary of Sempra Energy in our Sempra Texas Utility reportable segment) has agreed to acquire a 50-percent economic interest in Sharyland Holdings, LP for approximately \$98 million, subject to customary closing adjustments. In connection with and prior to the consummation of the Securities Purchase Agreement, Sharyland Holdings, LP would own 100-percent of the membership interests in SU and SU would convert into a limited liability company, which is expected to be named Sharyland Utilities, LLC. Upon consummation of the Securities Purchase Agreement, Sempra Texas Utilities Holdings I, LLC would indirectly own and account for its 50-percent membership interest in Sharyland Utilities, LLC as an equity method investment. Consummation of the Securities Purchase Agreement is subject to the satisfaction of certain closing conditions, including the substantially concurrent consummation of the transactions contemplated by the InfraREIT Merger Agreement and the Asset Exchange Agreement.

For Oncor to fund its acquisition of interests in InfraREIT, Sempra Energy and certain indirect equity holders of TTI have committed to make capital contributions proportionate to Sempra Energy's and TTI's respective ownership interests in Oncor, with the amount estimated to be contributed by Sempra Energy equal to approximately \$1,025 million, excluding Sempra Energy's share of the approximately \$40 million for a management agreement termination fee, as well as other customary transaction costs incurred by InfraREIT that would be borne by Oncor as part of the acquisition. We expect to fund our capital contribution to Oncor and to purchase the 50-percent limited-partner interest in Sharyland Holdings, LP by utilizing a portion of the \$1.6 billion in proceeds received from the sale of certain of our non-utility U.S. renewables business to a subsidiary of Con Ed, which we discuss below. The capital contributions are contingent on the satisfaction of customary conditions, including the substantially simultaneous closing of the transactions contemplated by the InfraREIT Merger Agreement, but are not a condition to the transactions contemplated therein.

The transactions contemplated by the agreements discussed above require approval by the PUCT and the FERC, as well as the satisfaction of other regulatory requirements, approval by the Committee on Foreign Investment in the United States, certain lender consents and other customary closing conditions. Early termination of the applicable 30-day waiting period required under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, was granted on December 14, 2018. In addition, the acquisition of InfraREIT was approved by the InfraREIT stockholders on February 7, 2019. We expect that the transactions will close in mid-2019.

ASSETS HELD FOR SALE

We classify assets as held for sale when management approves and commits to a formal plan to actively market an asset for sale and we expect the sale to close within the next 12 months. Upon classifying an asset as held for sale, we record the asset at the lower of its carrying value or its estimated fair value reduced for selling costs.

SEMPRA SOUTH AMERICAN UTILITIES

On January 25, 2019, our board of directors approved a plan to sell our South American businesses and we classified these businesses as held for sale. We expect to complete the sales process by the end of 2019.

SEMPRA MEXICO

Termoeléctrica de Mexicali

In February 2016, management approved a plan to market and sell Sempra Mexico's TdM, a 625-MW natural gas-fired power plant located in Mexicali, Baja California, Mexico. As a result, we stopped depreciating the plant and classified it as held for sale.

In connection with the sales process, in late September 2016 and early July 2017, Sempra Mexico received market information indicating that the fair value of TdM was less than its carrying value. After performing analysis of the information, Sempra Mexico reduced the carrying value of TdM by recognizing noncash impairment charges of \$131 million (\$111 million after-tax) in the third quarter of 2016 and \$71 million in the second quarter of 2017, recorded in Impairment Losses on Sempra Energy's Consolidated Statements of Operations. We discuss non-recurring fair value measures and the associated accounting impact on TdM in Note 12.

In connection with TdM's classification as held for sale, we recognized an \$8 million income tax benefit in 2017 and an \$8 million income tax expense in 2016 for a deferred Mexican income tax liability related to the excess of carrying value over the tax basis.

On June 1, 2018, management terminated its sales process for TdM due to evolving strategic considerations for projects under development at IEnova. As a result, the assets and liabilities previously classified as held for sale were reclassified as held and used, and depreciation resumed. We reclassified the property, plant and equipment at its carrying value (which approximated fair value) at the date of the subsequent decision not to sell.

PLANNED SALE OF U.S. RENEWABLES AND NATURAL GAS STORAGE ASSETS

On June 25, 2018, our board of directors approved a plan to divest certain non-utility natural gas storage assets in the southeast U.S., and all our U.S. wind and U.S. solar assets (collectively, the Assets). The plan to sell the Assets resulted from the most recent comprehensive strategic portfolio review by the board of directors and management. As a result of our plan to sell the Assets, we recorded impairment charges totaling \$1.5 billion (\$900 million after tax and NCI) in June 2018. These charges included \$1.3 billion (\$755 million after tax and NCI) at Sempra LNG & Midstream, which are included in Impairment Losses on Sempra Energy's Consolidated Statement of Operations, and \$200 million (\$145 million after tax) at Sempra Renewables, which is included in Equity Earnings on Sempra Energy's Consolidated Statement of Operations. In December 2018, we reduced the impairment of \$1.3 billion recorded at Sempra LNG & Midstream in June 2018 by \$183 million (\$126 million after tax and NCI) as a result of the sales agreement for certain storage assets described below, resulting in a total impairment charge of \$1.1 billion (\$629 million after tax and NCI) for the year ended December 31, 2018. These impairment charges primarily represent an adjustment of the related assets' carrying values to estimated fair values, less costs to sell when applicable, which we discuss further in Notes 6 and 12.

Sempra Renewables

In December 2018, Sempra Renewables completed the sale of all its operating solar assets, its solar and battery storage development projects and one wind generation facility, as we describe below in "Divestitures." In February 2019, Sempra Renewables entered into an agreement with American Electric Power to sell its remaining wind assets and investments for \$551 million, subject to working capital adjustments and customary closing conditions. We expect to complete the sale in the second quarter of 2019.

Sempra LNG & Midstream

On February 7, 2019, Sempra LNG & Midstream completed the sale of its non-utility natural gas storage assets in the southeast U.S. (comprised of Mississippi Hub and Bay Gas) to an affiliate of ArcLight Capital Partners. Sempra LNG & Midstream received cash proceeds of \$328 million (subject to working capital adjustments and Sempra LNG & Midstream's purchase for \$20 million of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale).

The carrying amounts of the major classes of assets and related liabilities classified as held for sale associated with Sempra Renewables and Sempra LNG & Midstream are summarized in the following table.

ASSETS HELD FOR SALE AT DECEMBER 31, 2018*(Dollars in millions)*

	Sempra Renewables	Sempra LNG & Midstream
Cash and cash equivalents	\$ 7	\$ —
Accounts receivable – trade, net	2	5
Accounts receivable – other, net	1	—
Other current assets	1	6
Property, plant and equipment, net	366	324
Other noncurrent assets	—	1
Total assets held for sale	<u>\$ 377</u>	<u>\$ 336</u>
Accounts payable – trade	\$ 2	\$ 2
Other current liabilities	4	3
Asset retirement obligations	6	8
Total liabilities held for sale	<u>\$ 12</u>	<u>\$ 13</u>

Sempra Renewables' wind equity method investments totaling \$291 million at December 31, 2018, which are included in the plan of sale, continue to be classified as Other Investments on Sempra Energy's Consolidated Balance Sheets. See Note 6 for further discussion.

DIVESTITURES

The following table summarizes the deconsolidation of certain subsidiaries that have been sold in 2018 and 2016, as we discuss below:

DECONSOLIDATION OF SUBSIDIARIES*(Dollars in millions)*

	Certain subsidiaries of Sempra Renewables	
	At December 13, 2018	At September 12, 2016
Proceeds from sale, net of transaction costs	\$ 1,585	\$ 304
Cash	(7)	(2)
Restricted cash	(7)	—
Other current assets	(14)	(17)
Property, plant and equipment, net	(1,303)	(199)
Other investments	(329)	—
Goodwill	—	(72)
Other noncurrent assets	(24)	(65)
Current liabilities	8	25
Long-term debt	70	67
Asset retirement obligations	52	—
Other noncurrent liabilities	5	89
Noncontrolling interests	486	—
Accumulated other comprehensive income	(9)	—
Gain on sale	<u>\$ 513</u>	<u>\$ 130</u>

SEMPRA RENEWABLES

On December 13, 2018, Sempra Renewables completed the sale of the following assets to a subsidiary of Con Ed for cash proceeds of \$1.6 billion:

- all of its operating solar assets, including assets that we owned through JVs or through tax equity arrangements (other than those interests held by tax equity investors);
- its solar and battery storage development projects; and
- its 50-percent interest in the Broken Bow 2 wind generation facility.

In 2018, we recognized a pretax gain of \$513 million (\$367 million after tax) in Gain on Sale of Assets on Sempra Energy's Consolidated Statement of Operations.

SEMPRA LNG & MIDSTREAM

EnergySouth Inc.

On September 12, 2016, Sempra LNG & Midstream completed the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas, to Spire Inc. for cash proceeds of \$318 million, net of \$2 million cash sold, with the buyer assuming debt of \$67 million. In 2016, we recognized a pretax gain of \$130 million (\$78 million after tax) in Gain on Sale of Assets on Sempra Energy's Consolidated Statement of Operations.

Investment in Rockies Express

In March 2016, Sempra LNG & Midstream entered into an agreement to sell its 25-percent interest in Rockies Express to a subsidiary of Tallgrass Development, LP for cash consideration of \$440 million, subject to adjustment at closing. The transaction closed in May 2016 for total cash proceeds of \$443 million.

At the date of the agreement, the carrying value of Sempra LNG & Midstream's investment in Rockies Express was \$484 million. Following the execution of the agreement, Sempra LNG & Midstream measured the fair value of its equity method investment at \$440 million, and recognized a \$44 million (\$27 million after tax) impairment in Equity Earnings on the Sempra Energy Consolidated Statement of Operations. We discuss non-recurring fair value measures and the associated accounting impact on our investment in Rockies Express in Note 12.

We discuss Sempra LNG & Midstream's 2016 permanent release of pipeline capacity that it held with Rockies Express and others in Note 16.

NOTE 6. INVESTMENTS IN UNCONSOLIDATED ENTITIES

We generally account for investments under the equity method when we have significant influence over, but do not have control of, these entities. In these cases, our pro rata shares of the entities' net assets are included in Investment in Oncor Holdings or Other Investments on the Consolidated Balance Sheets. We evaluate the carrying value of unconsolidated entities for impairment under the U.S. GAAP provisions for equity method investments.

We adjust each investment for our share of each investee's earnings or losses, dividends, and OCI. Equity earnings and losses, both before and net of income tax, are combined and presented as Equity Earnings on the Consolidated Statements of Operations. See Note 8 for information regarding the pretax income or loss used to calculate our ETR.

Our equity method investments include various domestic and foreign entities. Our domestic equity method investees are typically partnerships that are pass-through entities for income tax purposes and therefore they do not record income tax. Sempra Energy's income tax on earnings from these equity method investees, other than Oncor Holdings as we discuss below, is included in Income Tax Expense on the Consolidated Statements of Operations.

Oncor is a partnership for U.S. federal income tax purposes and is not included in the consolidated income tax return of Sempra Energy. Rather, only our equity earnings from our investment in Oncor Holdings (a disregarded entity for tax purposes) are included in our consolidated income tax return. A tax sharing agreement with TTI, Oncor Holdings and Oncor provides for the calculation of an income tax liability substantially as if Oncor Holdings and Oncor were taxed as corporations, and requires tax payments determined on that basis. While partnerships are not subject to income taxes, in consideration of the tax sharing agreement and Oncor being subject to the provisions of U.S. GAAP governing rate-regulated operations, Oncor recognizes amounts determined under cost-based regulatory rate-setting processes (with such costs including income taxes), as if it were taxed as a corporation. As a result, since Oncor Holdings consolidates Oncor, we recognize equity earnings from our investment in Oncor Holdings net of its recorded income tax.

With the exception of RBS Sempra Commodities, discussed below, our foreign equity method investees are corporations whose operations are taxable on a stand-alone basis in the countries in which they operate, and we recognize our equity in such income or losses net of investee income tax. We may be subject to additional taxes related to these foreign investments, such as taxes on cash dividends or other cash distributions, which are recorded in Income Tax Expense on the Consolidated Statements of Operations.

We provide the carrying values of our investments and earnings (losses) on these investments in the following tables.

EQUITY METHOD AND OTHER INVESTMENT BALANCES

(Dollars in millions)

	Percent ownership		December 31,	
	December 31,		December 31,	
	2018	2017	2018	2017
Sempra Texas Utility:				
Oncor Holdings ⁽¹⁾	100%	—%	\$ 9,652	\$ —
Sempra South American Utilities:				
Eletrans	50	50	\$ 17	\$ 16
Sempra Mexico:				
Energía Sierra Juárez ⁽²⁾	50	50	43	39
IMG ⁽³⁾	40	40	328	221
TAG ⁽⁴⁾	50	50	376	364
Sempra Renewables:				
Wind:				
Auwahi Wind	50	50	38	42
Broken Bow 2 Wind	—	50	—	32
Cedar Creek 2 Wind	50	50	69	72
Flat Ridge 2 Wind ⁽⁵⁾	50	50	82	255
Fowler Ridge 2 Wind	50	50	45	44
Mehoopany Wind ⁽⁶⁾	50	50	57	89
Solar:				
California solar partnership	—	50	—	107
Copper Mountain Solar 2	—	50	—	35
Copper Mountain Solar 3	—	50	—	44
Mesquite Solar 1	—	50	—	81
Other			—	12
Sempra LNG & Midstream:				
Cameron LNG JV ⁽⁷⁾	50.2	50.2	1,271	997
Parent and other:				
RBS Sempra Commodities	49	49	—	67
Total equity method investments			2,326	2,517
Other			11	10
Total other investments			\$ 2,337	\$ 2,527

⁽¹⁾ The carrying value of our equity method investment is \$2,814 million higher than the underlying equity in the net assets of the investee due to \$2,868 million of equity method goodwill and \$69 million in basis differences in AOCI, offset by \$123 million due to a tax sharing liability to TTI under the tax sharing agreement.

⁽²⁾ The carrying value of our equity method investment is \$12 million higher than the underlying equity in the net assets of the investee due to the remeasurement of our retained investment to fair value in 2014.

⁽³⁾ The carrying value of our equity method investment is \$5 million higher than the underlying equity in the net assets of the investee due to guarantees, which we discuss below.

⁽⁴⁾ The carrying value of our equity method investment is \$130 million higher than the underlying equity in the net assets of the investee due to equity method goodwill.

⁽⁵⁾ The carrying value of our equity method investment is \$169 million lower than the underlying equity in the net assets of the investee due to an other-than-temporary impairment recorded in 2018.

⁽⁶⁾ The carrying value of our equity method investment is \$31 million lower than the underlying equity in the net assets of the investee due to an other-than-temporary impairment recorded in 2018.

⁽⁷⁾ The carrying value of our equity method investment is \$284 million and \$237 million higher than the underlying equity in the net assets of the investee at December 31, 2018 and 2017, respectively, primarily due to guarantees, which we discuss below, and interest capitalized on the investment, as the JV has not commenced its planned principal operations.

EARNINGS (LOSSES) FROM EQUITY METHOD INVESTMENTS*(Dollars in millions)*

	Years ended December 31,		
	2018	2017	2016
Earnings (losses) recorded before income tax⁽¹⁾:			
Sempra Renewables:			
Wind:			
Auwahi Wind	\$ 3	\$ 5	\$ 4
Broken Bow 2 Wind	(2)	(2)	(2)
Cedar Creek 2 Wind	(1)	(2)	(2)
Flat Ridge 2 Wind ⁽²⁾	(178)	(13)	(7)
Fowler Ridge 2 Wind	3	4	4
Mehoopany Wind ⁽²⁾	(30)	(1)	—
Solar:			
California solar partnership	8	7	7
Copper Mountain Solar 2	5	5	6
Copper Mountain Solar 3	8	8	8
Mesquite Solar 1	18	18	17
Other	(3)	—	(1)
Sempra LNG & Midstream:			
Cameron LNG JV	—	5	(2)
Rockies Express Pipeline	—	—	(26)
Parent and other:			
RBS Sempra Commodities ⁽²⁾	(67)	—	—
	<u>(236)</u>	<u>34</u>	<u>6</u>
Earnings (losses) recorded net of income tax:			
Sempra Texas Utility:			
Oncor Holdings	371	—	—
Sempra South American Utilities:			
Eletrans	1	4	3
Sempra Mexico:			
DEN	—	(13)	5
Energía Sierra Juárez	2	—	6
IEnova Pipelines	—	—	64
IMG	29	45	—
TAG	9	6	—
	<u>412</u>	<u>42</u>	<u>78</u>
Total	\$ 176	\$ 76	\$ 84

⁽¹⁾ We provide our ETR calculation in Note 8.⁽²⁾ Losses from equity method investment in 2018 include an other-than-temporary impairment charge, which we discuss below.

At December 31, 2018 and 2017, our share of the undistributed earnings of equity method investments was \$332 million and \$89 million, respectively, including \$221 million at December 31, 2018 in undistributed earnings of more than 50-percent-owned equity method investments.

SEMPRA TEXAS UTILITY

As we discuss in Note 5, on March 9, 2018, we completed the acquisition of an indirect, 100-percent interest in Oncor Holdings, which owns an 80.25-percent interest in Oncor. Due to ring-fencing measures, governance mechanisms and commitments in effect following the Merger, we do not have the power to direct the significant activities of Oncor Holdings and Oncor, which we discuss in the following paragraph. Consequently, we account for our investment in Oncor Holdings under the equity method, which comprises our Sempra Texas Utility reportable segment.

As we discuss in Note 5, reorganized EFH (renamed Sempra Texas Holdings Corp.) was merged with an indirect subsidiary of Sempra Energy, and its assets and liabilities relating to non-Oncor operations have been subsumed into our parent organization. Certain ring-fencing measures, existing governance mechanisms and commitments remain in effect following the Merger, which

are intended to enhance Oncor Holdings' and Oncor's separateness from their owners and to mitigate the risk that these entities would be negatively impacted by the bankruptcy of, or other adverse financial developments affecting, EFH or its other subsidiaries or the owners of EFH. Sempra Energy does not control Oncor Holdings or Oncor, and the ring-fencing measures, governance mechanisms and commitments limit our ability to direct the management, policies and operations of Oncor Holdings and Oncor, including the deployment or disposition of their assets, declarations of dividends, strategic planning and other important corporate issues and actions. These limitations include limited representation on the Oncor Holdings and Oncor boards of directors, as Oncor Holdings and Oncor will continue to have a majority of independent directors. Thus, Oncor Holdings and Oncor will continue to be managed independently (i.e., ring-fenced). As such, we account for our 100-percent ownership interest in Oncor Holdings as an equity method investment.

We recognized equity earnings, net of income tax, of \$371 million for the period since the acquisition date through December 31, 2018. We contributed \$230 million in cash, commensurate with our ownership interest, to Oncor in 2018 in accordance with the terms of the Merger Agreement, which enabled Oncor to achieve its required capital structure calculated for regulatory purposes.

We provide summarized income statement and balance sheet information for Oncor Holdings in the following table.

SUMMARIZED FINANCIAL INFORMATION – ONCOR HOLDINGS

(Dollars in millions)

	March 9 - December 31, 2018	
Gross revenues	\$	3,347
Operating expense		(2,434)
Income from operations		913
Interest expense		(285)
Income tax expense		(119)
Net income		455
Noncontrolling interest held by TTI		(94)
Earnings attributable to Sempra Energy ⁽¹⁾		360
		At December 31, 2018
Current assets	\$	772
Noncurrent assets		21,980
Current liabilities		2,217
Noncurrent liabilities		11,756

⁽¹⁾ *Earnings at Oncor Holdings differ from earnings at the Sempra Texas Utility segment due to amortization of a tax sharing liability associated with a tax sharing arrangement and basis differences in AOCI.*

SEMPRA SOUTH AMERICAN UTILITIES

In 2017, Sempra South American Utilities recorded the equitization of its \$19 million note receivable due from Eletrans, resulting in an increase in its investment in this unconsolidated JV. In 2017, Sempra South American Utilities invested cash of \$1 million in Eletrans.

SEMPRA MEXICO

IEnova Pipelines, DEN and TAG

On September 26, 2016, IEnova completed the acquisition of the remaining 50-percent interest in IEnova Pipelines and IEnova Pipelines became a consolidated subsidiary. Prior to the acquisition date, IEnova owned 50 percent of IEnova Pipelines and accounted for its interest as an equity method investment. As of the acquisition date, IEnova accounted for IEnova Pipelines' 50-percent interest in DEN as an equity method investment.

On November 15, 2017, IEnova acquired the remaining 50-percent interest in DEN, and DEN became a consolidated subsidiary. Since the acquisition date, IEnova accounts for DEN's 50-percent interest in TAG as an equity method investment. We discuss these acquisitions in Note 5.

IMG

In June 2016, IMG, a JV between IEnova and a subsidiary of TransCanada, was awarded the right to build, own and operate the Sur de Texas-Tuxpan natural gas marine pipeline by the CFE. IEnova has a 40-percent interest in the project and accounts for its interest as an equity method investment, and TransCanada owns the remaining 60-percent interest. The marine pipeline is fully contracted under a 25-year natural gas transportation service contract with the CFE. We expect the project to be completed in the second quarter of 2019. In 2018, 2017 and 2016, Sempra Mexico invested cash of \$80 million, \$72 million and \$100 million, respectively, in the IMG JV.

SEMPRA RENEWABLES

On June 25, 2018, our board of directors approved a plan to sell all wind assets and investments and solar assets and investments, including our wholly owned facilities, JV and tax equity investments and projects in development in our Sempra Renewables reportable segment, all of which are located in the U.S. In December 2018, Sempra Renewables completed the sale of all its operating solar assets, including its solar equity method investments, and one wind equity method investment to a subsidiary of Con Ed. In February 2019, Sempra Renewables entered into an agreement to sell its remaining wind assets and investments. We expect to complete the sale in the second quarter of 2019. We discuss the completed sale with Con Ed and plan of sale for the remaining assets in Note 5.

Because of our expectation of a shorter holding period as a result of this plan of sale, we evaluated the recoverability of the carrying amounts of our wind and solar equity method investments and concluded there is an other-than-temporary impairment on certain of our wind equity method investments totaling \$200 million, which is included in Equity Earnings on Sempra Energy's Consolidated Statement of Operations for the year ended December 31, 2018. Our wind investments totaling \$291 million at December 31, 2018, which are also included in the plan of sale, continue to be classified as Other Investments on Sempra Energy's Consolidated Balance Sheet. We discuss non-recurring fair value measures in Note 12.

In 2018 and 2016, Sempra Renewables invested cash of \$5 million and \$18 million, respectively, in its unconsolidated JVs.

SEMPRA LNG & MIDSTREAM

Rockies Express

As we discuss in Note 5, in May 2016, Sempra LNG & Midstream sold its 25-percent interest in Rockies Express, a partnership that operates a natural gas pipeline, REX, that links the Rocky Mountain region to the upper Midwest and the eastern U.S.

Cameron LNG JV

Cameron LNG JV was formed in October 2014 among Sempra Energy and three project partners. The Cameron LNG existing regasification terminal that was contributed to Cameron LNG JV included two marine berths and three LNG storage tanks, and facilities capable of processing 1.5 Bcf of natural gas per day. The current liquefaction project, which is utilizing Cameron LNG JV's existing facilities, is comprised of three liquefaction trains and is being designed to have a nameplate capacity of 13.9 Mtpa of LNG, with an expected export capability of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. We account for our investment in Cameron LNG JV under the equity method.

Sempra LNG & Midstream capitalized interest of \$47 million in each of 2018, 2017 and 2016, related to this equity method investment that has not commenced planned principal operations. In 2018 and 2017, Sempra LNG & Midstream invested cash of \$228 million and \$1 million, respectively, in Cameron LNG JV.

Cameron LNG JV Financing

General. In August 2014, Cameron LNG JV entered into finance documents (collectively, Loan Facility Agreements) for senior secured financing in an initial aggregate principal amount of up to \$7.4 billion under three debt facilities provided by the Japan Bank for International Cooperation (JBIC) and 29 international commercial banks, some of which will benefit from insurance coverage provided by Nippon Export and Investment Insurance (NEXI).

The Cameron LNG JV Loan Facility Agreements and related finance documents provide senior secured term loans with a maturity date of July 15, 2030. The proceeds of the loans are being used for financing the cost of development and construction of the three-train Cameron LNG project. The Loan Facility Agreements and related finance documents contain customary representations and affirmative and negative covenants for project finance facilities of this kind with the lenders of the type participating in the Cameron LNG JV financing.

Interest. The weighted-average all-in cost of the loans outstanding under all the Loan Facility Agreements (and based on certain assumptions as to timing of drawdown) is 1.59 percent per annum over LIBOR prior to financial completion of the project and 1.78 percent per annum over LIBOR following financial completion of the project. The Loan Facility Agreements require Cameron LNG JV to hedge 50 percent of outstanding borrowings to fix the interest rate, beginning in 2016. The hedges are to remain in place until the debt principal has been amortized by 50 percent. In November 2014, Cameron LNG JV entered into floating-to-fixed interest rate swaps for approximately \$3.7 billion notional amount, resulting in an effective fixed rate of 3.19 percent for the LIBOR component of the interest rate on the loans. In June 2015, Cameron LNG JV entered into additional floating-to-fixed interest rate swaps effective starting in 2020, for approximately \$1.5 billion notional amount, resulting in an effective fixed rate of 3.32 percent for the LIBOR component of the interest rate on the loans.

Guarantees. In August 2014, Sempra Energy entered into agreements for the benefit of all of Cameron LNG JV's creditors under the Loan Facility Agreements and related finance documents. Pursuant to these agreements, Sempra Energy has severally guaranteed 50.2 percent of Cameron LNG JV's obligations under the Loan Facility Agreements and related finance documents, or a maximum amount of \$3.9 billion. Guarantees for the remaining 49.8 percent of Cameron LNG JV's senior secured financing have been provided by the other project owners. Sempra Energy's agreements and guarantees will terminate upon financial completion of the three-train Cameron LNG project, which is subject to satisfaction of certain conditions, including all three trains achieving commercial operations and meeting certain operational performance tests. We expect the project to achieve financial completion and the guarantees to be terminated approximately nine months after all three trains achieve commercial operation. Sempra Energy recorded a liability of \$82 million in October 2014, with an associated carrying value of \$9 million at December 31, 2018, for the fair value of its obligations associated with the Loan Facility Agreements and related finance documents, which constitute guarantees. This liability is being reduced on a straight-line basis over the duration of the guarantees by recognizing equity earnings from Cameron LNG JV, included in Equity Earnings.

In August 2014, Sempra Energy and the other project owners entered into a transfer restrictions agreement with Société Générale, as intercreditor agent for the lenders under the Loan Facility Agreements. Pursuant to the transfer restriction agreement, Sempra Energy agreed to certain restrictions on its ability to dispose of Sempra Energy's indirect fully diluted economic and beneficial ownership interests in Cameron LNG JV. These restrictions vary over time. Prior to financial completion of the three-train Cameron LNG project, Sempra Energy must retain 37.65 percent of such interest in Cameron LNG JV. Starting six months after financial completion of the three-train Cameron LNG project, Sempra Energy must retain at least 10 percent of the indirect fully diluted economic and beneficial ownership interest in Cameron LNG JV. In addition, at all times, a Sempra Energy controlled (but not necessarily wholly owned) subsidiary must directly own 50.2 percent of the membership interests of the Cameron LNG JV.

Events of Default. Cameron LNG JV's Loan Facility Agreements and related finance documents contain events of default customary for such financings, including events of default for: failure to pay principal and interest on the due date; insolvency of Cameron LNG JV; abandonment of the project; expropriation; unenforceability or termination of the finance documents; and a failure to achieve financial completion of the project by a financial completion deadline date of September 30, 2021 (with up to an additional 365 days extension beyond such date permitted in cases of force majeure). A delay in construction that results in a failure to achieve financial completion of the project by this financial completion deadline date would therefore result in an event of default under Cameron LNG JV's financing and a potential demand on Sempra Energy's guarantees.

Security. To support Cameron LNG JV's obligations under the Loan Facility Agreements and related finance documents, Cameron LNG JV has granted security over all of its assets, subject to customary exceptions, and all equity interests in Cameron LNG JV have been pledged to HSBC Bank USA, National Association, as security trustee for the benefit of all of Cameron LNG JV's creditors. As a result, an enforcement action by the lenders taken in accordance with the finance documents could result in the exercise of such security interests by the lenders and the loss of ownership interests in Cameron LNG JV by Sempra Energy and the other project partners.

The security trustee under Cameron LNG JV's financing can demand that a payment be made by Sempra Energy under its guarantees of Sempra Energy's 50.2-percent share of senior debt obligations due and payable either on the date such amounts were due from Cameron LNG JV (taking into account cure periods) in the event of a failure by Cameron LNG JV to pay such senior debt obligations when they become due or within 10 business days in the event of an acceleration of senior debt obligations under the terms of the finance documents. If an event of default occurs under the Sempra Energy completion agreement, the security trustee can demand that Sempra Energy purchase its 50.2-percent share of all then outstanding senior debt obligations within five business days (other than in the case of a bankruptcy default, which is automatic).

RBS SEMPRA COMMODITIES

RBS Sempra Commodities is a United Kingdom limited liability partnership formed by Sempra Energy and RBS in 2008 to own and operate the commodities-marketing businesses previously operated through wholly owned subsidiaries of Sempra Energy. We and RBS sold substantially all of the partnership's businesses and assets in four separate transactions completed in 2010 and 2011. Since 2011, our investment balance has reflected our share of the remaining partnership assets, including amounts retained by the partnership to help offset unanticipated future general and administrative costs necessary to complete the dissolution of the partnership and the distribution of the partnership's remaining assets, if any. We account for our investment in RBS Sempra Commodities under the equity method.

In September 2018, we fully impaired our remaining equity method investment in RBS Sempra Commodities by recording a charge of \$65 million in Equity Earnings on Sempra Energy's Consolidated Statement of Operations. We discuss matters related to RBS Sempra Commodities further in "Other Litigation" in Note 16.

SUMMARIZED FINANCIAL INFORMATION

We present summarized financial information below, aggregated for all other equity method investments (excluding Oncon Holdings) for the periods in which we were invested in the entities. The amounts below represent the results of operations and aggregate financial position of 100 percent of each of Sempra Energy's other equity method investments.

SUMMARIZED FINANCIAL INFORMATION – OTHER EQUITY METHOD INVESTMENTS

(Dollars in millions)

	Years ended December 31,		
	2018 ⁽¹⁾	2017 ⁽²⁾	2016 ⁽³⁾
Gross revenues	\$ 727	\$ 846	\$ 1,079
Operating expense	(614)	(590)	(726)
Income from operations	113	256	353
Interest expense	(330)	(217)	(127)
Net (loss) income/(Losses) earnings ⁽⁴⁾	(33)	116	252

	At December 31,	
	2018 ⁽¹⁾	2017 ⁽²⁾
Current assets	\$ 625	\$ 974
Noncurrent assets	14,803	14,087
Current liabilities	813	797
Noncurrent liabilities	10,226	9,809

⁽¹⁾ On December 13, 2018, Sempra Renewables sold all its operating solar assets, including its solar equity method investments, and its 50-percent interest in the Broken Bow 2 wind power generation facility to a subsidiary of Con Ed. As of December 13, 2018, the solar equity method investments and Broken Bow 2 are no longer equity method investments.

⁽²⁾ On November 15, 2017, IEnova completed the asset acquisition of PEMEX's 50-percent interest in DEN, increasing its ownership percentage to 100 percent. As of November 15, 2017, DEN is no longer an equity method investment.

⁽³⁾ On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in IEnova Pipelines, increasing its ownership percentage to 100 percent, and on May 9, 2016, Sempra LNG & Midstream sold its 25-percent interest in Rockies Express. As of the respective transaction dates, IEnova Pipelines and Rockies Express are no longer equity method investments.

⁽⁴⁾ Except for our investments in South America and Mexico, there was no income tax recorded by the entities, as they are primarily domestic partnerships.

GUARANTEES

Project financing at wind JVs generally requires the JV partners, for each partner's interest, to return cash to the projects in the event that the projects do not meet certain cash flow criteria or in the event that the projects' debt service and O&M reserve accounts are not maintained at specific thresholds. In some cases, the JV partners have provided guarantees to the lenders in lieu of the projects' funding the reserve account requirements. We recorded liabilities for the fair value of certain of our obligations associated with these guarantees, and the liabilities are being amortized over their expected lives. The outstanding loans at our wind JVs are not guaranteed by the partners, but are secured by project assets.

IEnova has an indirect 40-percent ownership interest and TransCanada has an indirect 60-percent ownership interest in IMG. IEnova and TransCanada have each provided guarantees to third parties associated with construction of IMG's Sur de Texas – Tuxpan natural gas marine pipeline. IEnova expects the construction giving rise to these guarantees to be completed in the second quarter of 2019.

At December 31, 2018, we provided guarantees aggregating a maximum of \$152 million with an associated aggregated carrying value of \$5 million for guarantees related to project financing. In addition, at December 31, 2018, we provided guarantees to JVs aggregating a maximum of \$79 million with an associated aggregated carrying value of \$1 million, primarily related to PPAs and EPC contracts. We discuss guarantees associated with Cameron LNG JV in "Sempra LNG & Midstream – Cameron LNG JV" above.

NOTE 7. DEBT AND CREDIT FACILITIES

LINES OF CREDIT

At December 31, 2018, Sempra Energy Consolidated had an aggregate of \$5.4 billion in three primary committed lines of credit for Sempra Energy, Sempra Global and the California Utilities to provide liquidity and to support commercial paper, the principal terms of which we describe below. Available unused credit on these lines at December 31, 2018 was approximately \$4.2 billion. Our foreign operations have additional general purpose credit facilities aggregating \$1.8 billion at December 31, 2018. Available unused credit on these lines totaled \$0.8 billion at December 31, 2018.

PRIMARY U.S. COMMITTED LINES OF CREDIT

(Dollars in millions)

	At December 31, 2018			
	Total facility	Commercial paper outstanding ⁽¹⁾	Adjustment for combined limit	Available unused credit
Sempra Energy ⁽²⁾	\$ 1,250	\$ —	\$ —	\$ 1,250
Sempra Global ⁽³⁾	3,185	(669)	—	2,516
California Utilities ⁽⁴⁾ :				
SDG&E	750	(291)	(6)	453
SoCalGas	750	(256)	(41)	453
Less: subject to a combined limit of \$1 billion for both utilities	(500)	—	47	(453)
	1,000	(547)	—	453
Total	\$ 5,435	\$ (1,216)	\$ —	\$ 4,219

⁽¹⁾ Because the commercial paper programs are supported by these lines, we reflect the amount of commercial paper outstanding as a reduction to the available unused credit.

⁽²⁾ The facility also provides for issuance of up to \$400 million of letters of credit on behalf of Sempra Energy with the amount of borrowings otherwise available under the facility reduced by the amount of outstanding letters of credit. No letters of credit were outstanding at December 31, 2018.

⁽³⁾ Sempra Energy guarantees Sempra Global's obligations under the credit facility.

⁽⁴⁾ The facility also provides for the issuance of letters of credit on behalf of each utility subject to a combined letter of credit commitment of \$250 million for both utilities. The amount of borrowings otherwise available under the facility is reduced by the amount of outstanding letters of credit. No letters of credit were outstanding at December 31, 2018.

Related to the committed lines of credit in the table above:

- Each is a 5-year syndicated revolving credit agreement expiring in October 2020.
- Citibank N.A. serves as administrative agent for the Sempra Energy and Sempra Global facilities and JPMorgan Chase Bank, N.A. serves as administrative agent for the California Utilities combined facility.
- Each facility has a syndicate of 21 lenders. No single lender has greater than a 7-percent share in any facility.
- Sempra Energy, SDG&E and SoCalGas must maintain a ratio of indebtedness to total capitalization (as defined in each agreement) of no more than 65 percent at the end of each quarter. Each entity is in compliance with this and all other financial covenants under its respective credit facility at December 31, 2018.
- Borrowings bear interest at benchmark rates plus a margin that varies with Sempra Energy's credit ratings in the case of the Sempra Energy and Sempra Global lines of credit, and with the borrowing utility's credit rating in the case of the California Utilities line of credit.
- The California Utilities' obligations under their agreement are individual obligations, and a default by one utility would not constitute a default by the other utility or preclude borrowings by, or the issuance of letters of credit on behalf of, the other utility.

CREDIT FACILITIES IN SOUTH AMERICA AND MEXICO

(U.S. dollar equivalent in millions)

	Denominated in	At December 31, 2018		
		Total facility	Amount outstanding	Available unused credit
Sempra South American Utilities ⁽¹⁾ :				
Peru ⁽²⁾	Peruvian sol	\$ 534	\$ (182) ⁽³⁾	\$ 352
Chile	Chilean peso	115	—	115
Sempra Mexico:				
IEnova ⁽⁴⁾	U.S. dollar	1,170	(808)	362
Total		\$ 1,819	\$ (990)	\$ 829

¹⁾ The credit facilities were entered into to finance working capital and for general corporate purposes and expire between 2019 and 2021.

²⁾ The Peruvian facilities require a debt to equity ratio of no more than 170 percent, with which we were in compliance at December 31, 2018.

³⁾ Includes bank guarantees of \$18 million.

⁴⁾ In February 2019, IEnova revised the terms of its five-year revolving credit facility by increasing the amount available under the facility from \$1.17 billion to \$1.5 billion, extending the expiration of the facility from August 2020 to February 2024 and increasing the syndicate of lenders from eight to 10.

Outside of these domestic and foreign committed credit facilities, we have bilateral unsecured standby letter of credit capacity with select lenders that is uncommitted and supported by reimbursement agreements. At December 31, 2018, we had approximately \$598 million in standby letters of credit outstanding under these agreements.

WEIGHTED-AVERAGE INTEREST RATES

The weighted-average interest rates on the total short-term debt at Sempra Energy Consolidated were 3.01 percent and 1.92 percent at December 31, 2018 and 2017, respectively. The weighted-average interest rates on total short-term debt at SDG&E were 2.97 percent and 1.65 percent at December 31, 2018 and 2017, respectively. The weighted-average interest rates on total short-term debt at SoCalGas were 2.58 percent and 1.64 percent at December 31, 2018 and 2017, respectively.

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LONG-TERM DEBT

The following tables show the detail and maturities of long-term debt outstanding:

	December 31,	
	2018	2017
SDG&E		
First mortgage bonds (collateralized by plant assets):		
1.65% July 1, 2018 ⁽¹⁾	\$ —	\$ 161
3% August 15, 2021	350	350
1.914% payable 2015 through February 2022	125	161
3.6% September 1, 2023	450	450
2.5% May 15, 2026	500	500
6% June 1, 2026	250	250
5.875% January and February 2034 ⁽¹⁾	176	176
5.35% May 15, 2035	250	250
6.125% September 15, 2037	250	250
4% May 1, 2039 ⁽¹⁾	75	75
6% June 1, 2039	300	300
5.35% May 15, 2040	250	250
4.5% August 15, 2040	500	500
3.95% November 15, 2041	250	250
4.3% April 1, 2042	250	250
3.75% June 1, 2047	400	400
4.15% May 15, 2048	400	—
	<u>4,776</u>	<u>4,573</u>
Other long-term debt:		
OMEC LLC variable-rate loan (5.2925% after floating-to-fixed rate swaps effective 2007), payable 2013 through April 2019 (collateralized by OMEC plant assets)	—	295
OMEC LLC variable-rate loan (4.7896% at December 31, 2018 except for \$142 at 5.2925% after floating-to-fixed rate swaps through April 1, 2019), payable 2019 through 2024 (collateralized by OMEC plant assets)	220	—
Capital lease obligations:		
Purchased-power contracts	1,270	731
Other	2	1
	<u>1,492</u>	<u>1,027</u>
	6,268	5,600
Current portion of long-term debt	(81)	(220)
Unamortized discount on long-term debt	(12)	(11)
Unamortized debt issuance costs	(37)	(34)
Total SDG&E	<u>6,138</u>	<u>5,335</u>
SoCalGas		
First mortgage bonds (collateralized by plant assets):		
5.45% April 15, 2018	—	250
1.55% June 15, 2018	—	250
3.15% September 15, 2024	500	500
3.2% June 15, 2025	350	350
2.6% June 15, 2026	500	500
5.75% November 15, 2035	250	250
5.125% November 15, 2040	300	300
3.75% September 15, 2042	350	350
4.45% March 15, 2044	250	250
4.125% June 1, 2048	400	—
4.3% January 15, 2049	550	—
	<u>3,450</u>	<u>3,000</u>
Other long-term debt (uncollateralized):		
1.875% Notes payable 2016 through May 2026 ⁽¹⁾	4	4
5.67% Notes January 18, 2028	5	5
Capital lease obligations	3	1
	<u>12</u>	<u>10</u>
	3,462	3,010
Current portion of long-term debt	(3)	(501)
Unamortized discount on long-term debt	(6)	(7)
Unamortized debt issuance costs	(26)	(17)
Total SoCalGas	<u>3,427</u>	<u>2,485</u>

LONG-TERM DEBT (CONTINUED)
(Dollars in millions)

	December 31,	
	2018	2017
Sempra Energy		
Other long-term debt (uncollateralized):		
6.15% Notes June 15, 2018	—	500
9.8% Notes February 15, 2019	500	500
Notes at variable rates (2.69% at December 31, 2018) July 15, 2019	500	—
1.625% Notes October 7, 2019	500	500
2.4% Notes February 1, 2020	500	—
2.4% Notes March 15, 2020	500	500
2.85% Notes November 15, 2020	400	400
Notes at variable rates (2.94% at December 31, 2018) January 15, 2021 ⁽¹⁾	700	—
Notes at variable rates (3.24% at December 31, 2018) March 15, 2021	850	850
2.875% Notes October 1, 2022	500	500
2.9% Notes February 1, 2023	500	—
4.05% Notes December 1, 2023	500	500
3.55% Notes June 15, 2024	500	500
3.75% Notes November 15, 2025	350	350
3.25% Notes June 15, 2027	750	750
3.4% Notes February 1, 2028	1,000	—
3.8% Notes February 1, 2038	1,000	—
6% Notes October 15, 2039	750	750
4% Notes February 1, 2048	800	—
Fair value adjustments for interest rate swaps, net	—	(1)
Build-to-suit lease ⁽²⁾	138	138
Sempra South American Utilities		
Other long-term debt (uncollateralized):		
Chilquinta Energía – 4.25% Series B Bonds October 30, 2030	186	205
Luz del Sur		
Bank loans 4.3% to 5.7% payable 2017 through December 2021	105	53
Corporate bonds at 4.75% to 8.75% payable 2014 through September 2029	432	415
Other bonds at 3.77% to 4.61% payable 2020 through May 2022	4	6
Capital lease obligations	6	6
Sempra Mexico		
Other long-term debt (uncollateralized unless otherwise noted):		
Notes February 8, 2018 at variable rates (2.66% after floating-to-fixed rate cross-currency swaps effective 2013)	—	66
6.3% Notes February 2, 2023 (4.12% after cross-currency swap)	198	198
Notes at variable rates (4.88% after floating-to-fixed rate swaps effective 2014), payable 2016 through December 2026, collateralized by plant assets	275	314
3.75% Notes January 14, 2028	300	300
Bank loans including \$246 at a weighted-average fixed rate of 6.67%, \$164 at variable rates (weighted-average rate of 6.33% after floating-to-fixed rate swaps effective 2014) and \$37 at variable rates (5.82% at December 31, 2018), payable 2016 through March 2032, collateralized by plant assets	447	468
4.875% Notes January 14, 2048	540	540
Loan at variables rates (6.07% at December 31, 2018) July 31, 2028	4	—
Sempra Renewables		
Other long-term debt (collateralized by project assets):		
Loan at variable rates (3.325% at December 31, 2017) payable 2012 through December 2028 except for \$59 at 3.668% after floating-to-fixed rate swaps effective June 2012 ⁽¹⁾	—	77
Sempra LNG & Midstream		
Other long-term debt (uncollateralized):		
Notes at 2.87% to 3.51% October 1, 2026 ⁽¹⁾	21	20
	13,756	9,405
Current portion of long-term debt	(1,589)	(706)
Unamortized discount on long-term debt	(38)	(13)
Unamortized premium on long-term debt	4	4
Unamortized debt issuance costs	(87)	(65)
Total other Sempra Energy	12,046	8,625
Total Sempra Energy Consolidated	\$ 21,611	\$ 16,445

⁽¹⁾ Callable long-term debt not subject to make-whole provisions.

⁽²⁾ We discuss this lease in Notes 2 and 16.

MATURITIES OF LONG-TERM DEBT⁽¹⁾*(Dollars in millions)*

	SDG&E	SoCalGas	Other Sempra Energy	Total Sempra Energy Consolidated
2019	\$ 64	\$ —	\$ 1,590	\$ 1,654
2020	71	—	1,548	1,619
2021	425	—	1,700	2,125
2022	62	—	620	682
2023	500	—	1,321	1,821
Thereafter	3,874	3,459	6,833	14,166
Total	\$ 4,996	\$ 3,459	\$ 13,612	\$ 22,067

⁽¹⁾ Excludes capital lease obligations, build-to-suit lease, fair value adjustments for interest rate swaps, discounts, premiums and debt issuance costs.

Various long-term obligations totaling \$12.9 billion at Sempra Energy Consolidated at December 31, 2018 are unsecured. This includes unsecured long-term obligations totaling \$9 million at SoCalGas. There were no unsecured long-term obligations at SDG&E.

CALLABLE LONG-TERM DEBT

At the option of Sempra Energy, SDG&E and SoCalGas, certain debt at December 31, 2018 is callable subject to premiums:

CALLABLE LONG-TERM DEBT*(Dollars in millions)*

	SDG&E	SoCalGas	Other Sempra Energy	Total Sempra Energy Consolidated
Not subject to make-whole provisions	\$ 251	\$ 4	\$ 721	\$ 976
Subject to make-whole provisions	4,525	3,455	10,274	18,254

In addition, the OMEC LLC loan that we discuss below, with \$220 million of outstanding borrowings at December 31, 2018, may be prepaid at OMEC LLC's option.

FIRST MORTGAGE BONDS

The California Utilities issue first mortgage bonds secured by a lien on utility plant assets. The California Utilities may issue additional first mortgage bonds if in compliance with the provisions of their bond agreements (indentures). These indentures require, among other things, the satisfaction of pro forma earnings-coverage tests on first mortgage bond interest and the availability of sufficient mortgaged property to support the additional bonds, after giving effect to prior bond redemptions. The most restrictive of these tests (the property test) would permit the issuance, subject to CPUC authorization, of additional first mortgage bonds of \$5.7 billion at SDG&E and \$1.2 billion at SoCalGas at December 31, 2018.

SDG&E

In May 2018, SDG&E publicly offered and sold \$400 million of 4.15-percent, first mortgage bonds maturing in 2048. SDG&E used the proceeds from the offering to repay outstanding commercial paper.

SoCalGas

In May 2018, SoCalGas publicly offered and sold \$400 million of 4.125-percent, first mortgage bonds maturing in 2048. In September 2018, SoCalGas publicly offered and sold \$550 million of 4.30-percent, first mortgage bonds maturing in 2049. SoCalGas used the proceeds from the offerings to repay outstanding commercial paper and for other general corporate purposes.

OTHER LONG-TERM DEBT

Sempra Energy

On January 12, 2018, we issued the following debt securities and received net proceeds of \$4.9 billion (after deducting discounts and debt issuance costs of \$68 million):

NOTES ISSUED IN LONG-TERM DEBT OFFERING

(Dollars in millions)

Title of each class of securities	Aggregate principal amount	Maturity	Interest payments
Notes at variable rates ⁽¹⁾ due 2019	\$ 500	July 15, 2019	Quarterly
Notes at variable rates ⁽²⁾ due 2021	700	January 15, 2021	Quarterly
2.4% Notes due 2020	500	February 1, 2020	Semi-annually
2.9% Notes due 2023	500	February 1, 2023	Semi-annually
3.4% Notes due 2028	1,000	February 1, 2028	Semi-annually
3.8% Notes due 2038	1,000	February 1, 2038	Semi-annually
4% Notes due 2048	800	February 1, 2048	Semi-annually

⁽¹⁾ Bears interest at a rate per annum equal to the 3-month LIBOR rate, plus 25 bps.

⁽²⁾ Bears interest at a rate per annum equal to the 3-month LIBOR rate, plus 50 bps.

The variable-rate notes due 2019 are not subject to redemption at our option. At our option, we may redeem some or all of the variable-rate notes due 2021 at any time on or after January 14, 2019 at the applicable redemption price per the terms of the notes. At our option, we may redeem some or all of the fixed-rate notes of each series at any time at the applicable redemption price for such series of fixed-rate notes.

The notes are unsecured and unsubordinated obligations, ranking on a parity in right of payment with all of our other unsecured and unsubordinated indebtedness and guarantees. The notes rank senior to all our existing and future indebtedness, if any, that is subordinated to the notes. The notes are effectively subordinated to any secured indebtedness we have or may incur (to the extent of the collateral securing that indebtedness) and are also effectively subordinated to all indebtedness and other liabilities of our subsidiaries.

We used a substantial portion of the net proceeds from this offering to finance a portion of the Merger Consideration and associated transaction costs, as we discuss in Note 5, and approximately \$800 million to pay down commercial paper.

SDG&E

In December 2018, OMEC LLC entered into a loan agreement for \$220 million, the proceeds of which were used to repay its project financing loan used for the construction of OMEC that was scheduled to mature in April 2019. The loan matures in August 2024, unless OMEC LLC exercises its put option in which case the loan will mature in November 2019. We describe the put option in Note 1. The loan bears interest at a rate per annum equal to the 3-month LIBOR rate plus 200 bps. OMEC LLC previously entered into a floating-to-fixed interest rate swap for \$142 million of the project financing loan that matures on April 30, 2019, which results in a fixed rate of 5.2925 percent. In December 2018, OMEC LLC entered into new floating-to-fixed interest rate swaps to hedge future interest payments on the loan with notional amounts of \$159 million that will become effective on April 30, 2019 and mature on October 31, 2019, resulting in a fixed rate of 2.765 percent, and \$142 million of swaptions that, if exercised, will become effective on October 31, 2019 and mature on October 31, 2023, resulting in a fixed rate of 3.0375 percent. We provide additional information concerning the interest rate swaps in Note 11. The loan is with third party lenders and is collateralized by OMEC's assets. SDG&E is not a party to the loan agreement and does not have any additional implicit or explicit financial responsibility to OMEC LLC, nor would SDG&E be required to assume OMEC LLC's loan under the put option purchase scenario.

In 2017, SDG&E satisfied all of the conditions precedent for a CPUC-approved 20-year PPA with a 500-MW power plant facility. Construction of the facility was completed and delivery of contracted power commenced in December 2018, at which time we recorded a \$550 million capital lease obligation on SDG&E's and Sempra Energy's Consolidated Balance Sheets.

Sempra South American Utilities

Luz del Sur drew bank loans in 2018 totaling \$107 million, of which \$61 million is included in the amounts outstanding under Peruvian credit facilities in the “Credit Facilities in South America and Mexico” table above, at interest rates ranging from 4.3 percent to 5.7 percent and maturity dates ranging from September 2020 through December 2021.

In October 2018, Luz del Sur publicly offered and sold \$50 million of corporate bonds at 7 percent, which mature in October 2028.

Sempra Renewables

As we discuss in Note 5, in December 2018, Sempra Renewables completed the sale of all its operating solar assets and certain other assets. Sempra Renewables received \$1.6 billion in cash proceeds and the buyer assumed debt of \$70 million, net of unamortized debt issuance costs.

INTEREST RATE SWAPS

We discuss our fair value and cash flow hedging interest rate swaps in Note 11.

NOTE 8. INCOME TAXES

We provide our calculations of ETRs in the following table.

INCOME TAX EXPENSE AND EFFECTIVE INCOME TAX RATES

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
Income tax expense	\$ 96	\$ 1,276	\$ 389
Income before income taxes and equity earnings of unconsolidated entities	\$ 1,046	\$ 1,551	\$ 1,824
Equity (losses) earnings, before income tax ⁽¹⁾	(236)	34	6
Pretax income	\$ 810	\$ 1,585	\$ 1,830
Effective income tax rate	12%	81%	21%
SDG&E:			
Income tax expense	\$ 173	\$ 155	\$ 280
Income before income taxes	\$ 849	\$ 576	\$ 845
Effective income tax rate	20%	27%	33%
SoCalGas:			
Income tax expense	\$ 92	\$ 160	\$ 143
Income before income taxes	\$ 493	\$ 557	\$ 493
Effective income tax rate	19%	29%	29%

⁽¹⁾ We discuss how we recognize equity earnings in Note 6.

We present in the table below reconciliations of net U.S. statutory federal income tax rates to our ETRs.

RECONCILIATION OF FEDERAL INCOME TAX RATES TO EFFECTIVE INCOME TAX RATES

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
U.S. federal statutory income tax rate	21%	35%	35%
Effects of the TCJA	11	55	—
Non-U.S. earnings taxed at rates different from the U.S. statutory income tax rate ⁽¹⁾	9	(3)	(3)
Utility depreciation	7	6	4
Foreign exchange and inflation effects ⁽²⁾	4	3	(2)
Compensation-related items	3	—	(2)
Unrecognized income tax benefits	2	—	—
Noncontrolling interests in tax equity arrangements	2	—	—
Resolution of prior years' income tax items	—	(2)	—
Impairment losses at Sempra LNG & Midstream	(19)	—	—
Utility repairs expenditures	(8)	(6)	(4)
Tax credits	(6)	(4)	(3)
State income taxes, net of federal income tax benefit	(5)	1	1
Self-developed software expenditures	(4)	(4)	(3)
Allowance for equity funds used during construction	(3)	(3)	(2)
Amortization of excess deferred income taxes	(2)	—	—
Merger-related transaction costs	(1)	—	—
Other, net	1	3	—
Effective income tax rate	12%	81%	21%
SDG&E:			
U.S. federal statutory income tax rate	21%	35%	35%
State income taxes, net of federal income tax benefit	5	3	5
Depreciation	3	7	5
Effects of the TCJA	—	5	—
Resolution of prior years' income tax items	—	(4)	(1)
Compensation-related items	—	—	(1)
Repairs expenditures	(3)	(8)	(4)
Self-developed software expenditures	(2)	(6)	(3)
Allowance for equity funds used during construction	(2)	(4)	(2)
Amortization of excess deferred income taxes	(1)	—	—
Other, net	(1)	(1)	(1)
Effective income tax rate	20%	27%	33%
SoCalGas:			
U.S. federal statutory income tax rate	21%	35%	35%
Depreciation	7	9	9
Unrecognized income tax benefits	4	—	—
State income taxes, net of federal income tax benefit	2	3	2
Compensation-related items	1	—	(1)
Repairs expenditures	(7)	(8)	(9)
Self-developed software expenditures	(3)	(5)	(6)
Allowance for equity funds used during construction	(2)	(3)	(2)
Amortization of excess deferred income taxes	(2)	—	—
Resolution of prior years' income tax items	(1)	(2)	2
Other, net	(1)	—	(1)
Effective income tax rate	19%	29%	29%

⁽¹⁾ Related to operations in Mexico, Chile and Peru.

⁽²⁾ Primarily due to fluctuation of the Mexican peso against the U.S. dollar. We record income tax expense (benefit) from the transactional effects of foreign currency and inflation because of appreciation (depreciation) of the Mexican peso. We also recognize gains (losses) in Other Income, Net, on the Consolidated Statements of Operations from foreign currency derivatives that are partially hedging Sempra Mexico parent's exposure to movements in the Mexican peso from its controlling interest in IEnova.

On December 22, 2017, the TCJA was signed into law. This legislation significantly changed the IRC. Under U.S. GAAP, certain effects of the TCJA were required to be recognized upon enactment, and, as a result, Sempra Energy, SDG&E, and SoCalGas recorded these effects in 2017.

The TCJA reduced the U.S. statutory corporate income tax rate from 35 percent to 21 percent, effective January 1, 2018. U.S. GAAP requires that deferred income tax assets and liabilities, including NOLs, be remeasured at the income tax rate expected to apply when those temporary differences reverse and that the effects of any change to such income tax rate be recognized in the period when the change was enacted. This remeasurement resulted in significant reductions in deferred income tax balances at Sempra Energy Consolidated, SDG&E and SoCalGas in 2017.

The remeasurement of deferred income tax balances at SDG&E and SoCalGas resulted in excess deferred income taxes that previously have been collected from ratepayers at the higher rate. As we discuss in Note 4, these excess deferred income taxes have been recorded as regulatory liabilities at December 31, 2018 and 2017 and will generally be refunded to ratepayers in accordance with the IRC's normalization provisions and as determined by the CPUC and the FERC. Certain components of deferred income taxes could be attributed to shareholders rather than ratepayers. These components include deferred income taxes generated by activities outside of ratemaking.

We recorded the effects of the TCJA in 2017 using our best estimates and the information available to us through the date those financial statements were issued. In 2018, we adjusted our 2017 provisional estimates and completed our accounting for the income tax effects of the TCJA as permitted by ASU 2018-05, which we describe in Note 2. The primary impacts of the TCJA recorded in 2017 and the related 2018 adjustments were:

- **Lower U.S. statutory corporate income tax rate:** We remeasured our deferred income tax balances because of the change in the U.S. statutory corporate federal income tax rate from 35 percent to 21 percent, which resulted in income tax expense of \$182 million for the year ended December 31, 2017 for Sempra Energy Consolidated. In 2018, we recorded \$20 million of income tax expense to adjust the 2017 provisional remeasurement amount. SDG&E's and SoCalGas' impacts were primarily offset with adjustments to regulatory liabilities; however, they also recorded \$28 million and \$2 million of income tax expense, respectively, for the year ended December 31, 2017. In 2018, adjustments to 2017 provisional estimates included a decrease of \$38 million at SDG&E and an increase of \$5 million at SoCalGas of deferred income tax liabilities, with each amount offset by a change in their respective regulatory liabilities.
- **Deemed repatriation:** Sempra Energy recorded income tax expense of \$328 million for the year ended December 31, 2017 associated with the one-time deemed repatriation tax on foreign undistributed earnings. In 2018, we accrued income tax benefit of \$8 million to adjust our 2017 provisional estimate. We anticipate that we will repatriate our foreign undistributed earnings (estimated to be approximately \$4 billion) that have been taxed at the U.S. federal level as a result of the deemed repatriation tax. In 2018, we repatriated \$338 million to the U.S. and expect to repatriate an additional \$3.7 billion in the foreseeable future as cash is generated by our businesses at the local level through operations or sale. In addition to the deemed repatriation tax, we accrued \$360 million in 2017 of U.S. state and non-U.S. withholding tax on our expected future repatriation of foreign undistributed earnings. In 2018, we accrued additional income tax expense of \$44 million to adjust our 2017 provisional estimates.
- **Global intangible low-taxed income:** In 2018, Sempra Energy recorded a partial valuation allowance of \$29 million against its federal NOL carryforward as of December 31, 2017 due to the impact of the global intangible low-taxed income provisions of the TCJA.

The table below summarizes the effects of the TCJA in 2018 and 2017:

EFFECTS OF THE TAX CUTS AND JOBS ACT OF 2017

(Dollars in millions)

	Sempra Energy Consolidated	SDG&E	SoCalGas
2018:			
Consolidated Balance Sheets:			
Increase (decrease) in net deferred income tax liabilities due to remeasurement	\$ 16	\$ (38)	\$ 5
Increase (decrease) in net regulatory liabilities from remeasurement of deferred income tax assets and liabilities	\$ 33	\$ 38	\$ (5)
Consolidated Statements of Operations:			
Income tax expense related to remeasurement of deferred income tax assets and liabilities	\$ 49	\$ —	\$ —
Income tax benefit related to deemed repatriation	(8)	—	—
U.S. state and non-U.S. withholding tax expense related to expected future repatriation of foreign earnings	44	—	—
Total increase in income tax expense	\$ 85	\$ —	\$ —
2017:			
Consolidated Balance Sheets:			
Decrease in net deferred income tax liabilities due to remeasurement	\$ (2,220)	\$ (1,400)	\$ (972)
Increase in net regulatory liabilities from remeasurement of deferred income tax assets and liabilities	\$ 2,402	\$ 1,428	\$ 974
Consolidated Statements of Operations:			
Income tax expense related to remeasurement of deferred income tax assets and liabilities	\$ 182	\$ 28	\$ 2
Income tax expense related to deemed repatriation	328	—	—
U.S. state and non-U.S. withholding tax expense related to expected future repatriation of foreign earnings	360	—	—
Total increase in income tax expense	\$ 870	\$ 28	\$ 2

We have not recorded deferred income taxes with respect to remaining basis differences of approximately \$1 billion between financial statement and income tax investment amounts in our non-U.S. subsidiaries because we consider them to be indefinitely reinvested as of December 31, 2018. It is currently not practicable to determine the hypothetical amount of tax that might be payable if the underlying basis differences were realized. On January 25, 2019, our board of directors approved a plan to sell our South American businesses. We are evaluating the effects of the planned sale on our indefinite reinvestment assertion and expect to record any impacts to our tax provision in the first quarter of 2019.

For SDG&E and SoCalGas, the CPUC requires flow-through rate-making treatment for the current income tax benefit or expense arising from certain property-related and other temporary differences between the treatment for financial reporting and income tax, which will reverse over time. Under the regulatory accounting treatment required for these flow-through temporary differences, deferred income tax assets and liabilities are not recorded to deferred income tax expense, but rather to a regulatory asset or liability, which impacts the ETR. As a result, changes in the relative size of these items compared to pretax income, from period to period, can cause variations in the ETR. The following items are subject to flow-through treatment:

- repairs expenditures related to a certain portion of utility plant fixed assets;
- the equity portion of AFUDC, which is non-taxable;
- a portion of the cost of removal of utility plant assets;
- utility self-developed software expenditures;
- depreciation on a certain portion of utility plant assets; and
- state income taxes.

The AFUDC related to equity recorded for regulated construction projects at Sempra Mexico has similar flow-through treatment.

The 2016 GRC FD required SDG&E and SoCalGas to each establish a two-way income tax expense memorandum account to track certain revenue variances resulting from certain differences between the income tax expense forecasted in the GRC and the income tax expense incurred from 2016 through 2018. We discuss the tracking accounts further in Note 4.

We record income tax (expense) benefit from the transactional effects of foreign currency and inflation. Such effects are partially mitigated by net gains (losses) from foreign currency derivatives that are hedging Sempra Mexico parent's exposure to movements in the Mexican peso from its controlling interest in IEnova.

The table below presents the geographic components of pretax income.

PRETAX INCOME – SEMPRA ENERGY CONSOLIDATED			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2018	2017	2016
By geographic components:			
U.S.	\$ (102)	\$ 878	\$ 773
Non-U.S.	912	707	1,057
Total ⁽¹⁾	\$ 810	\$ 1,585	\$ 1,830

⁽¹⁾ See "Income Tax Expense and Effective Income Tax Rates" table above for calculation of pretax income.

U.S. pretax income was lower in 2018 compared to 2017 due to the 2018 impairment of certain assets at Sempra LNG & Midstream and Sempra Renewables (discussed in Notes 5 and 12), offset by the 2018 gain on the sale of assets at Sempra Renewables (discussed in Note 5) and the 2017 write-off of SDG&E's wildfire regulatory asset (discussed in Note 16). Non-U.S. pretax income was lower in 2017 compared to 2016 primarily due to the noncash gain in 2016 associated with the remeasurement of our equity interest in IEnova Pipelines (discussed in Note 5).

The components of income tax expense are as follows.

INCOME TAX EXPENSE (BENEFIT)

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
Current:			
U.S. federal	\$ (2)	\$ —	\$ —
U.S. state	66	—	1
Non-U.S.	214	116	171
Total	278	116	172
Deferred:			
U.S. federal	(120)	536	78
U.S. state	(159)	297	9
Non-U.S.	101	327	135
Total	(178)	1,160	222
Deferred investment tax credits	(4)	—	(5)
Total income tax expense	\$ 96	\$ 1,276	\$ 389
SDG&E:			
Current:			
U.S. federal	\$ 104	\$ 100	\$ —
U.S. state	30	65	22
Total	134	165	22
Deferred:			
U.S. federal	17	29	223
U.S. state	24	(41)	38
Total	41	(12)	261
Deferred investment tax credits	(2)	2	(3)
Total income tax expense	\$ 173	\$ 155	\$ 280
SoCalGas:			
Current:			
U.S. federal	\$ 4	\$ —	\$ —
U.S. state	10	23	40
Total	14	23	40
Deferred:			
U.S. federal	78	144	123
U.S. state	2	(5)	(18)
Total	80	139	105
Deferred investment tax credits	(2)	(2)	(2)
Total income tax expense	\$ 92	\$ 160	\$ 143

The tables below present the components of deferred income taxes:

DEFERRED INCOME TAXES – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	December 31,	
	2018	2017
Deferred income tax liabilities:		
Differences in financial and tax bases of fixed assets, investments and other assets ⁽¹⁾	\$ 3,780	\$ 4,233
U.S. state and non-U.S. withholding tax on repatriation of foreign earnings	382	360
Regulatory balancing accounts	359	376
Property taxes	41	37
Other deferred income tax liabilities	130	117
Total deferred income tax liabilities	4,692	5,123
Deferred income tax assets:		
Tax credits	1,114	1,066
Net operating losses	725	968
Compensation-related items	181	199
Postretirement benefits	255	251
Other deferred income tax assets	92	115
Accrued expenses not yet deductible	69	60
Deferred income tax assets before valuation allowances	2,436	2,659
Less: valuation allowances	164	133
Total deferred income tax assets	2,272	2,526
Net deferred income tax liability ⁽²⁾	\$ 2,420	\$ 2,597

⁽¹⁾ In addition to the financial over tax basis differences in fixed assets, the amount also includes financial over tax basis differences in various interests in partnerships and certain subsidiaries.

⁽²⁾ At December 31, 2018 and 2017, includes \$151 million and \$170 million, respectively, recorded as a noncurrent asset and \$2,571 million and \$2,767 million, respectively, recorded as a noncurrent liability on the Consolidated Balance Sheets.

DEFERRED INCOME TAXES – SDG&E AND SOCALGAS

(Dollars in millions)

	SDG&E		SoCalGas	
	December 31,		December 31,	
	2018	2017	2018	2017
Deferred income tax liabilities:				
Differences in financial and tax bases of utility plant and other assets	\$ 1,578	\$ 1,472	\$ 1,077	\$ 987
Regulatory balancing accounts	84	113	283	271
Property taxes	29	26	13	12
Other	10	10	2	1
Total deferred income tax liabilities	1,701	1,621	1,375	1,271
Deferred income tax assets:				
Net operating losses	—	—	—	58
Tax credits	6	7	3	15
Postretirement benefits	58	43	140	152
Compensation-related items	5	5	25	25
State income taxes	6	14	3	7
Accrued expenses not yet deductible	4	3	13	12
Other	6	19	14	7
Total deferred income tax assets	85	91	198	276
Net deferred income tax liability	\$ 1,616	\$ 1,530	\$ 1,177	\$ 995

The following table summarizes our unused NOLs and tax credit carryforwards.

NET OPERATING LOSSES AND TAX CREDIT CARRYFORWARDS

(Dollars in millions)

	Unused amount at December 31, 2018	Year expiration begins
Sempra Energy Consolidated:		
U.S. federal:		
NOLs ⁽¹⁾	\$ 2,688	2031
General business tax credits ⁽¹⁾	417	2032
Foreign tax credits ⁽²⁾	624	2024
U.S. state ⁽²⁾ :		
NOLs	1,942	2019
General business tax credits	82	2019
Non-U.S. ⁽²⁾		
NOLs	264	2019

⁽¹⁾ We have recorded deferred income tax benefits on these NOLs and tax credits, in total, because we currently believe they will be realized on a more-likely-than-not-basis.

⁽²⁾ We have not recorded deferred income tax benefits on a portion of these NOLs and tax credits because we currently believe they will not be realized on a more-likely-than-not-basis, as discussed below.

At December 31, 2018, Sempra Energy recorded a valuation allowance against a portion of its total deferred income tax assets, as shown above in the “Deferred Income Taxes – Sempra Energy Consolidated” table. A valuation allowance is recorded when, based on more-likely-than-not criteria, negative evidence outweighs positive evidence with regard to our ability to realize a deferred income tax asset in the future. Of the valuation allowances recorded to date, the negative evidence outweighs the positive evidence primarily due to cumulative pretax losses in various U.S. state and non-U.S. jurisdictions resulting in a deferred income tax asset related to NOLs, as shown in the “Net Operating Losses and Tax Credit Carryforwards” table above, that we currently do not believe will be realized on a more-likely-than-not basis. Of Sempra Energy’s total valuation allowance of \$164 million at December 31, 2018, \$20 million is related to non-U.S. NOLs and tax credits, \$35 million to U.S. state NOLs and tax credits and \$109 million to U.S. NOLs and foreign tax credits. Of Sempra Energy’s total valuation allowance of \$133 million at December 31, 2017, \$20 million was related to non-U.S. NOLs and tax credits, \$30 million to U.S. state NOLs and tax credits and \$83 million to U.S. foreign tax credits.

Following is a reconciliation of the changes in unrecognized income tax benefits and the potential effect on our ETR for the years ended December 31:

RECONCILIATION OF UNRECOGNIZED INCOME TAX BENEFITS

(Dollars in millions)

	2018	2017	2016
Sempra Energy Consolidated:			
Balance at January 1	\$ 89	\$ 90	\$ 87
Increase in prior period tax positions	7	22	2
Decrease in prior period tax positions	(1)	(15)	(2)
Increase in current period tax positions	24	4	6
Settlements with taxing authorities	—	(12)	(3)
Balance at December 31	<u>\$ 119</u>	<u>\$ 89</u>	<u>\$ 90</u>
Of December 31 balance, amounts related to tax positions that if recognized in future years would			
decrease the effective tax rate ⁽¹⁾	\$ (107)	\$ (77)	\$ (87)
increase the effective tax rate ⁽¹⁾	24	20	36
SDG&E:			
Balance at January 1	\$ 10	\$ 22	\$ 20
Increase in prior period tax positions	1	9	—
Decrease in prior period tax positions	—	(11)	—
Increase in current period tax positions	—	—	2
Settlements with taxing authorities	—	(10)	—
Balance at December 31	<u>\$ 11</u>	<u>\$ 10</u>	<u>\$ 22</u>
Of December 31 balance, amounts related to tax positions that if recognized in future years would			
decrease the effective tax rate ⁽¹⁾	\$ (9)	\$ (7)	\$ (19)
increase the effective tax rate ⁽¹⁾	1	1	13
SoCalGas:			
Balance at January 1	\$ 35	\$ 29	\$ 27
Increase in prior period tax positions	2	3	—
Decrease in prior period tax positions	—	—	(2)
Increase in current period tax positions	24	4	4
Settlements with taxing authorities	—	(1)	—
Balance at December 31	<u>\$ 61</u>	<u>\$ 35</u>	<u>\$ 29</u>
Of December 31 balance, amounts related to tax positions that if recognized in future years would			
decrease the effective tax rate ⁽¹⁾	\$ (51)	\$ (26)	\$ (29)
increase the effective tax rate ⁽¹⁾	23	20	24

⁽¹⁾ Includes temporary book and tax differences that are treated as flow-through for ratemaking purposes, as discussed above.

It is reasonably possible that within the next 12 months, unrecognized income tax benefits could decrease due to the following:

POSSIBLE DECREASES IN UNRECOGNIZED INCOME TAX BENEFITS WITHIN 12 MONTHS

(Dollars in millions)

	At December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
Expiration of statutes of limitations on tax assessments	\$ (1)	\$ —	\$ (2)
Potential resolution of audit issues with various U.S. federal, state and local and non-U.S. taxing authorities	(40)	(8)	(36)
	<u>\$ (41)</u>	<u>\$ (8)</u>	<u>\$ (38)</u>
SDG&E:			
Expiration of statutes of limitations on tax assessments	\$ —	\$ —	\$ (1)
Potential resolution of audit issues with various U.S. federal, state and local taxing authorities	(6)	(6)	(10)
	<u>\$ (6)</u>	<u>\$ (6)</u>	<u>\$ (11)</u>
SoCalGas:			
Potential resolution of audit issues with various U.S. federal, state and local taxing authorities	\$ (2)	\$ (2)	\$ (25)

Amounts accrued for interest and penalties associated with unrecognized income tax benefits are included in Income Tax Expense on the Consolidated Statements of Operations. Sempra Energy Consolidated accrued \$1 million and a negligible amount for interest expense and penalties at December 31, 2018 and 2017, respectively, on the Consolidated Balance Sheets, and recorded \$1 million of interest expense and penalties in 2018 and negligible amounts in each of 2017 and 2016 on the Consolidated Statements of Operations. SDG&E and SoCalGas each accrued negligible amounts for interest expense and penalties at December 31, 2018 and 2017 on the Consolidated Balance Sheets, and recorded negligible amounts of interest expense and penalties in each of 2018, 2017 and 2016 on the Consolidated Statements of Operations.

INCOME TAX AUDITS

Sempra Energy is subject to U.S. federal income tax as well as income tax of multiple state and non-U.S. jurisdictions. We remain subject to examination for U.S. federal tax years after 2014. We are subject to examination by major state tax jurisdictions for tax years after 2008. Certain major non-U.S. income tax returns for tax years 2008 through the present are open to examination. We are also open to examination for non-U.S. income tax returns related to our prior interest in our commodities business, which we divested in 2010, for years 1999 through 2010.

In addition, we have filed state refund claims for tax years back to 2006. The pre-2009 tax years for our major state tax jurisdictions are closed to new issues; therefore, no additional tax may be assessed by the taxing authorities for these tax years.

SDG&E and SoCalGas are subject to U.S. federal income tax as well as income tax of state jurisdictions. They remain subject to examination for U.S. federal tax years after 2014 and by state tax jurisdictions for tax years after 2008.

NOTE 9. EMPLOYEE BENEFIT PLANS

For our employee benefit plans, we:

- recognize an asset for a plan's overfunded status or a liability for a plan's underfunded status in the statement of financial position;
- measure a plan's assets and its obligations that determine its funded status as of the end of the fiscal year; and
- recognize changes in the funded status of pension and PBOP plans in the year in which the changes occur. Generally, those changes are reported in OCI and as a separate component of shareholders' equity.

The detailed information presented below covers the employee benefit plans of primarily Sempra Energy and its consolidated subsidiaries.

Sempra Energy has funded and unfunded noncontributory traditional defined benefit and cash balance plans, including separate plans for SDG&E and SoCalGas, which collectively cover all eligible employees, including members of the Sempra Energy board of directors who were participants in a predecessor plan on or before June 1, 1998. Pension benefits under the traditional defined

benefit plans are based on service and final average earnings, while the cash balance plans provide benefits using a career average earnings methodology.

Enova has an unfunded noncontributory defined benefit plan covering all employees. Chilquinta Energía has an unfunded noncontributory defined benefit plan covering all employees hired before October 1, 1981 and an unfunded noncontributory termination indemnity plan covering represented employees. The plans generally provide defined benefits to retirees based on date of hire, years of service and final average earnings.

Sempra Energy also has PBOP plans, including separate plans for SDG&E and SoCalGas, which collectively cover all domestic and certain foreign employees. The life insurance plans are both contributory and noncontributory, and the health care plans are contributory. Participants' contributions are adjusted annually. Other postretirement benefits include medical benefits for retirees' spouses.

Chilquinta Energía also has two noncontributory postretirement benefit plans that cover represented employees – a health care plan and an energy subsidy plan that provides for reduced energy rates. The health care plan includes benefits for retirees' spouses and dependents.

Pension and other postretirement benefits costs and obligations are dependent on assumptions used in calculating such amounts. We review these assumptions on an annual basis and update them as appropriate. We consider current market conditions, including interest rates, in making these assumptions. We use a December 31 measurement date for all of our plans.

RABBI TRUST

In support of its Supplemental Executive Retirement, Cash Balance Restoration and Deferred Compensation Plans, Sempra Energy maintains dedicated assets, including a Rabbi Trust and investments in life insurance contracts, which totaled \$416 million and \$455 million at December 31, 2018 and 2017, respectively.

PENSION AND OTHER POSTRETIREMENT BENEFIT PLANS

Benefit Plan Amendments Affecting 2018

In 2018, certain executive participants in a company nonqualified pension plan became eligible in this same plan for Supplemental Executive Retirement Plan benefits. This was treated as a plan amendment and increased the recorded pension liability by \$12 million at Sempra Energy and \$8 million at SDG&E.

Sale of Qualified Pension Plan Annuity Contracts

In March 2018, an insurance company purchased annuities for certain current annuitants in the SDG&E and SoCalGas qualified pension plans and assumed the obligation for payment of these annuities. At SDG&E in the first quarter of 2018 and at SoCalGas in the second quarter of 2018, the liability transferred for these annuities, plus the total year-to-date lump-sum payments, exceeded the settlement threshold, which triggered settlement accounting. This resulted in a reduction of the recorded pension liability and pension plan assets of \$363 million at Sempra Energy Consolidated, including \$132 million at SDG&E and \$231 million at SoCalGas. This also resulted in settlement charges in net periodic benefit cost of \$54 million at Sempra Energy Consolidated, including \$22 million at SDG&E and \$32 million at SoCalGas. The settlement charges were recorded as regulatory assets on the Consolidated Balance Sheets.

Settlement Accounting for Lump Sum Payments

In 2018, Sempra Energy Consolidated and SDG&E recorded settlement charges of \$12 million and \$4 million, respectively, and in 2017, Sempra Energy Consolidated recorded settlement charges of \$8 million for lump sum payments from its non-qualified pension plans that were in excess of the respective plan's service cost plus interest cost, thereby triggering settlement accounting.

Acquisition

On March 9, 2018, Sempra Energy completed the Merger, as we discuss in Note 5, and assumed unfunded other postretirement employee benefits obligations for health care and life insurance benefits, resulting in an increase of \$21 million in the other postretirement benefit plan liability at Sempra Energy Consolidated.

In 2018, we recorded \$27 million in AOCI representing an actuarial loss related to Oncor's pension plan.

Special Termination Benefits Affecting 2018, 2017 and 2016

In 2018 and 2016, certain nonrepresented, and in 2017, certain represented, employees age 62 or older with 5 years of service or age 55 to 61 with 10 years of service that retired under the Voluntary Retirement Enhancement Program offered in these years received an additional postretirement health benefit in the form of a \$100,000 Health Reimbursement Account. We treated the benefit obligation attributable to the Health Reimbursement Account as a special termination benefit. This resulted in increases to the recorded liability for PBOP and net periodic benefit cost of \$5 million for Sempra Energy Consolidated, \$3 million for SDG&E and \$2 million for SoCalGas in 2018, \$18 million for each of Sempra Energy Consolidated and SoCalGas in 2017, and \$26 million for Sempra Energy Consolidated, \$14 million for SDG&E and \$11 million for SoCalGas in 2016.

The Voluntary Retirement Enhancement Program resulted in a higher than expected number of retirements in 2017 and 2016. As a result, the total lump-sum benefits paid from the Sempra Energy nonqualified and SoCalGas qualified pension plans in 2017, and the SDG&E qualified pension plan in 2016, exceeded the settlement threshold, which triggered settlement accounting. This resulted in a reduction of the recorded pension liability and pension plan assets of \$194 million at Sempra Energy Consolidated and \$175 million at SoCalGas in 2017, and \$75 million at each of Sempra Energy Consolidated and SDG&E in 2016. This also resulted in settlement charges in net periodic benefit cost of \$38 million at Sempra Energy Consolidated and \$30 million at SoCalGas in 2017, and \$16 million at each of Sempra Energy Consolidated and SDG&E in 2016. The settlement charges at SoCalGas in 2017, and at SDG&E in 2016, were recorded as regulatory assets on the Consolidated Balance Sheets. Measurement dates of December 31, 2017 and 2016 were used for the respective settlement accounting triggered in those years, as the year-to-date lump-sum benefit payments first exceeded the settlement threshold in December of those years.

Benefit Obligations and Assets

The following three tables provide a reconciliation of the changes in the plans' projected benefit obligations and the fair value of assets during 2018 and 2017, and a statement of the funded status at December 31, 2018 and 2017:

PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS

SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$ 3,857	\$ 3,679	\$ 963	\$ 922
Service cost	124	117	21	21
Interest cost	141	151	36	39
Contributions from plan participants	—	—	23	20
Actuarial (gain) loss	(269)	286	(123)	6
Plan amendments	12	1	—	—
Benefit payments	(115)	(182)	(74)	(63)
Special termination benefits	—	—	5	18
Acquisition	—	—	21	—
Curtailments	—	(1)	—	—
Settlements	(394)	(194)	—	—
Net obligation at December 31	<u>3,356</u>	<u>3,857</u>	<u>872</u>	<u>963</u>
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	2,659	2,459	1,209	1,057
Actual return on plan assets	(180)	421	(56)	185
Employer contributions	190	155	6	10
Contributions from plan participants	—	—	23	20
Benefit payments	(115)	(182)	(74)	(63)
Settlements	(394)	(194)	—	—
Fair value of plan assets at December 31	<u>2,160</u>	<u>2,659</u>	<u>1,108</u>	<u>1,209</u>
Funded status at December 31	\$ (1,196)	\$ (1,198)	\$ 236	\$ 246
Net recorded (liability) asset at December 31	<u>\$ (1,196)</u>	<u>\$ (1,198)</u>	<u>\$ 236</u>	<u>\$ 246</u>

PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS
SAN DIEGO GAS & ELECTRIC COMPANY
(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$ 971	\$ 935	\$ 185	\$ 190
Service cost	30	29	5	5
Interest cost	35	38	7	8
Contributions from plan participants	—	—	8	7
Actuarial (gain) loss	(63)	50	(17)	(9)
Plan amendments	8	—	—	—
Benefit payments	(22)	(83)	(21)	(16)
Special termination benefits	—	—	3	—
Settlements	(145)	—	—	—
Transfer of liability from other plans	—	2	—	—
Net obligation at December 31	<u>814</u>	<u>971</u>	<u>170</u>	<u>185</u>
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	776	714	195	169
Actual return on plan assets	(56)	120	(12)	30
Employer contributions	47	22	2	5
Contributions from plan participants	—	—	8	7
Benefit payments	(22)	(83)	(21)	(16)
Settlements	(145)	—	—	—
Transfer of assets from other plans	—	3	—	—
Fair value of plan assets at December 31	<u>600</u>	<u>776</u>	<u>172</u>	<u>195</u>
Funded status at December 31	<u>\$ (214)</u>	<u>\$ (195)</u>	<u>\$ 2</u>	<u>\$ 10</u>
Net recorded (liability) asset at December 31	<u>\$ (214)</u>	<u>\$ (195)</u>	<u>\$ 2</u>	<u>\$ 10</u>

**PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS
SOUTHERN CALIFORNIA GAS COMPANY**

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$ 2,486	\$ 2,343	\$ 737	\$ 691
Service cost	81	76	15	14
Interest cost	92	98	27	29
Contributions from plan participants	—	—	14	13
Actuarial (gain) loss	(215)	216	(100)	16
Benefit payments	(65)	(73)	(49)	(44)
Special termination benefits	—	—	2	18
Settlements	(231)	(175)	—	—
Transfer of liability from other plans	—	1	—	—
Net obligation at December 31	<u>2,148</u>	<u>2,486</u>	<u>646</u>	<u>737</u>
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	1,694	1,579	993	870
Actual return on plan assets	(117)	269	(43)	151
Employer contributions	104	93	1	3
Contributions from plan participants	—	—	14	13
Benefit payments	(65)	(73)	(49)	(44)
Settlements	(231)	(175)	—	—
Transfer of assets from other plans	—	1	—	—
Fair value of plan assets at December 31	<u>1,385</u>	<u>1,694</u>	<u>916</u>	<u>993</u>
Funded status at December 31	<u>\$ (763)</u>	<u>\$ (792)</u>	<u>\$ 270</u>	<u>\$ 256</u>
Net recorded (liability) asset at December 31	<u>\$ (763)</u>	<u>\$ (792)</u>	<u>\$ 270</u>	<u>\$ 256</u>

Actuarial (gains) losses fluctuate based on changes in assumptions that we describe below in “Assumptions for Pension and Other Postretirement Benefit Plans” and updates to census data. In 2018, 2017 and 2016, the Society of Actuaries released updated mortality improvement projection scales, reflecting changes to projected observed longevity improvements in its mortality tables. We have incorporated these assumptions, adjusted for the Sempra Energy companies’ actual mortality experience, in our calculations for each of those years. Actuarial gains in pension plans at Sempra Energy Consolidated in 2018 were driven primarily by an increase in discount rates at SDG&E, SoCalGas and Sempra Energy and, additionally at SDG&E, due to updated census data, and at SoCalGas, due to a decrease in the conversion rate used to determine lump-sum distributions. The actuarial gains were partially offset by actuarial losses at SoCalGas and Sempra Energy due to updated census data and, additionally at SDG&E and SoCalGas, due to an increase in the interest crediting rate for the cash balance plans. Actuarial gains in PBOP plans at Sempra Energy Consolidated in 2018 were driven primarily by an increase in discount rates at SDG&E and SoCalGas and, additionally at SoCalGas, due to a reduction in the 2019 expected health care costs.

Net Assets and Liabilities

The assets and liabilities of the pension and PBOP plans are affected by changing market conditions as well as when actual plan experience is different than assumed. Such events result in investment gains and losses, which we defer and recognize in pension and other postretirement benefit costs over a period of years. Our funded pension and PBOP plans use the asset smoothing method, except for those at SDG&E. This method develops an asset value that recognizes realized and unrealized investment gains and losses over a three-year period. This adjusted asset value, known as the market-related value of assets, is used in conjunction with an expected long-term rate of return to determine the expected return-on-assets component of net periodic benefit cost. SDG&E does not use the asset smoothing method, but rather recognizes realized and unrealized investment gains and losses during the current year.

The 10-percent corridor accounting method is used at Sempra Energy Consolidated, SDG&E and SoCalGas. Under the corridor accounting method, if as of the beginning of a year unrecognized net gain or loss exceeds 10 percent of the greater of the projected benefit obligation or the market-related value of plan assets, the excess is amortized over the average remaining service period of active participants. The asset smoothing and 10-percent corridor accounting methods help mitigate volatility of net periodic benefit costs from year to year.

We recognize the overfunded or underfunded status of defined benefit pension and other postretirement plans as assets or liabilities, respectively; unrecognized changes in these assets and/or liabilities are normally recorded in AOCI on the balance sheet. The California Utilities record regulatory assets and liabilities that offset the funded pension and other postretirement plans' assets or liabilities, as these costs are expected to be recovered in future utility rates based on decisions by regulatory agencies.

The California Utilities record annual pension and other postretirement net periodic benefit costs equal to the contributions to their qualified plans as authorized by the CPUC. The annual contributions to the pension plans are limited to a minimum required funding amount as determined by the IRS. The annual contributions to PBOP plans are equal to the lesser of the maximum tax deductible amount or the net periodic cost calculated in accordance with U.S. GAAP for pension and PBOP plans. Any differences between booked net periodic benefit cost and amounts contributed to the pension and other postretirement plans for the California Utilities are disclosed as regulatory adjustments in accordance with U.S. GAAP for rate-regulated entities.

The net (liability) asset is included in the following categories on the Consolidated Balance Sheets at December 31:

PENSION AND OTHER POSTRETIREMENT BENEFIT OBLIGATIONS, NET OF PLAN ASSETS

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
Sempra Energy Consolidated:				
Noncurrent assets	\$ —	\$ —	\$ 272	\$ 266
Current liabilities	(65)	(69)	(6)	(1)
Noncurrent liabilities	(1,131)	(1,129)	(30)	(19)
Net recorded (liability) asset	\$ (1,196)	\$ (1,198)	\$ 236	\$ 246
SDG&E:				
Noncurrent assets	\$ —	\$ —	\$ 2	\$ 10
Current liabilities	(2)	(13)	—	—
Noncurrent liabilities	(212)	(182)	—	—
Net recorded (liability) asset	\$ (214)	\$ (195)	\$ 2	\$ 10
SoCalGas:				
Noncurrent assets	\$ —	\$ —	\$ 270	\$ 256
Current liabilities	(3)	(3)	—	—
Noncurrent liabilities	(760)	(789)	—	—
Net recorded (liability) asset	\$ (763)	\$ (792)	\$ 270	\$ 256

Amounts recorded in AOCI at December 31, net of income tax effects and amounts recorded as regulatory assets, are as follows:

AMOUNTS IN ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
Sempra Energy Consolidated:				
Net actuarial (loss) gain	\$ (114)	\$ (84)	\$ 8	\$ 4
Prior service cost	(12)	(4)	—	—
Total	\$ (126)	\$ (88)	\$ 8	\$ 4
SDG&E:				
Net actuarial loss	\$ (4)	\$ (8)		
Prior service cost	(6)	—		
Total	\$ (10)	\$ (8)		
SoCalGas:				
Net actuarial loss	\$ (6)	\$ (6)		
Prior service cost	(2)	(2)		
Total	\$ (8)	\$ (8)		

Sempra Energy, SDG&E and SoCalGas each have a funded pension plan. The following table shows the obligations of funded pension plans with benefit obligations in excess of plan assets at December 31:

OBLIGATIONS OF FUNDED PENSION PLANS				
<i>(Dollars in millions)</i>				
	2018		2017	
Sempra Energy Consolidated:				
Projected benefit obligation	\$	3,130	\$	3,623
Accumulated benefit obligation		2,894		3,334
Fair value of plan assets		2,160		2,659
SDG&E:				
Projected benefit obligation	\$	788	\$	939
Accumulated benefit obligation		762		900
Fair value of plan assets		600		776
SoCalGas:				
Projected benefit obligation	\$	2,123	\$	2,462
Accumulated benefit obligation		1,919		2,220
Fair value of plan assets		1,385		1,694

We also have unfunded pension plans at Sempra Energy, SDG&E, SoCalGas, IEnova and Chilquinta Energía. The following table shows the obligations of unfunded pension plans at December 31:

OBLIGATIONS OF UNFUNDED PENSION PLANS				
<i>(Dollars in millions)</i>				
	2018		2017	
Sempra Energy Consolidated:				
Projected benefit obligation	\$	226	\$	234
Accumulated benefit obligation		201		215
SDG&E:				
Projected benefit obligation	\$	26	\$	32
Accumulated benefit obligation		19		30
SoCalGas:				
Projected benefit obligation	\$	25	\$	24
Accumulated benefit obligation		21		21

Sempra Energy, SDG&E and SoCalGas each have a funded other postretirement benefit plan. The following table shows the obligations of funded other postretirement benefit plans with accumulated postretirement benefit obligations in excess of plan assets at December 31:

OBLIGATIONS OF FUNDED OTHER POSTRETIREMENT BENEFIT PLANS				
<i>(Dollars in millions)</i>				
	2018		2017	
Sempra Energy Consolidated:				
Accumulated postretirement benefit obligation	\$	30	\$	32
Fair value of plan assets		20		21

We also have unfunded other postretirement benefit plans at Sempra Energy and Chilquinta Energía. The following table shows the obligations of unfunded other postretirement benefit plans at December 31:

OBLIGATIONS OF UNFUNDED OTHER POSTRETIREMENT BENEFIT PLANS				
<i>(Dollars in millions)</i>				
	2018		2017	
Sempra Energy Consolidated:				
Accumulated postretirement benefit obligation	\$	26	\$	9

Net Periodic Benefit Cost

The following tables provide the components of net periodic benefit cost and pretax amounts recognized in OCI for the years ended December 31:

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OCI SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Pension benefits			Other postretirement benefits		
	2018	2017	2016	2018	2017	2016
NET PERIODIC BENEFIT COST						
Service cost	\$ 124	\$ 117	\$ 107	\$ 21	\$ 21	\$ 20
Interest cost	141	151	160	36	39	42
Expected return on assets	(157)	(161)	(166)	(70)	(66)	(69)
Amortization of:						
Prior service cost	11	11	11	1	1	—
Actuarial loss (gain)	23	36	30	(6)	(4)	(1)
Settlement charges	66	38	16	—	—	—
Special termination benefits	—	—	—	5	18	26
Net periodic benefit cost	208	192	158	(13)	9	18
Regulatory adjustment	(30)	(42)	(57)	17	—	(11)
Total expense recognized	178	150	101	4	9	7
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS RECOGNIZED IN OCI						
Net loss (gain)	56	—	26	(4)	(2)	(2)
Prior service cost	12	1	—	—	—	—
Amortization of actuarial loss	(12)	(10)	(10)	—	—	—
Amortization of prior service cost	(2)	(1)	(1)	—	—	—
Settlements	(12)	(8)	—	—	—	—
Total recognized in OCI	42	(18)	15	(4)	(2)	(2)
Total recognized in net periodic benefit cost and OCI	\$ 220	\$ 132	\$ 116	\$ —	\$ 7	\$ 5

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OCI
SAN DIEGO GAS & ELECTRIC COMPANY

(Dollars in millions)

	Pension benefits			Other postretirement benefits		
	2018	2017	2016	2018	2017	2016
NET PERIODIC BENEFIT COST						
Service cost	\$ 30	\$ 29	\$ 29	\$ 5	\$ 5	\$ 5
Interest cost	35	38	41	7	8	7
Expected return on assets	(47)	(47)	(49)	(13)	(11)	(12)
Amortization of:						
Prior service cost	2	1	1	3	3	3
Actuarial loss (gain)	1	9	10	(3)	—	(1)
Settlement charges	26	—	16	—	—	—
Special termination benefits	—	—	—	3	—	14
Net periodic benefit cost	47	30	48	2	5	16
Regulatory adjustment	(8)	(8)	(45)	—	—	(14)
Total expense recognized	39	22	3	2	5	2
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS						
RECOGNIZED IN OCI						
Net (gain) loss	(1)	2	1	—	—	—
Prior service cost	8	—	—	—	—	—
Amortization of actuarial loss	(1)	(1)	(1)	—	—	—
Settlements	(4)	—	—	—	—	—
Total recognized in OCI	2	1	—	—	—	—
Total recognized in net periodic benefit cost and OCI	\$ 41	\$ 23	\$ 3	\$ 2	\$ 5	\$ 2

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OCI
SOUTHERN CALIFORNIA GAS COMPANY

(Dollars in millions)

	Pension benefits			Other postretirement benefits		
	2018	2017	2016	2018	2017	2016
NET PERIODIC BENEFIT COST						
Service cost	\$ 81	\$ 76	\$ 67	\$ 15	\$ 14	\$ 14
Interest cost	92	98	101	27	29	32
Expected return on assets	(98)	(103)	(103)	(56)	(53)	(56)
Amortization of:						
Prior service cost (credit)	8	9	9	(3)	(3)	(4)
Actuarial loss (gain)	13	19	11	(2)	(3)	—
Settlement charges	32	30	—	—	—	—
Special termination benefits	—	—	—	2	18	11
Net periodic benefit cost	128	129	85	(17)	2	(3)
Regulatory adjustment	(22)	(34)	(12)	17	—	3
Total expense recognized	106	95	73	—	2	—
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS						
RECOGNIZED IN OCI						
Net loss	1	—	4	—	—	—
Prior service cost	—	—	2	—	—	—
Amortization of prior service cost	(1)	(1)	—	—	—	—
Total recognized in OCI	—	(1)	6	—	—	—
Total recognized in net periodic benefit cost and OCI	\$ 106	\$ 94	\$ 79	\$ —	\$ 2	\$ —

Assumptions for Pension and Other Postretirement Benefit Plans

Benefit Obligation and Net Periodic Benefit Cost

Except for the IEnova and Chilquinta Energía plans, we develop the discount rate assumptions based on the results of a third party modeling tool that matches each plan's expected cash flows to interest rates and expected maturity values of individually selected bonds in a hypothetical portfolio. The model controls the level of accumulated surplus that may result from the selection of bonds based solely on their premium yields by limiting the number of years to look back for selection to 3 years for pre-30-year and 6 years for post-30-year benefit payments. Additionally, the model ensures that an adequate number of bonds are selected in the portfolio by limiting the amount of the plan's benefit payments that can be met by a single bond to 7.5 percent.

We selected individual bonds from a universe of Bloomberg AA-rated bonds that:

- have an outstanding issue of at least \$50 million;
- are non-callable (or callable with make-whole provisions);
- exclude collateralized bonds; and
- exclude the top and bottom 10 percent of yields to avoid relying on bonds that might be mispriced or misgraded.

This selection methodology also mitigates the impact of market volatility on the portfolio by excluding bonds with the following characteristics:

- the issuer is on review for downgrade by a major rating agency if the downgrade would eliminate the issuer from the portfolio;
- recent events have caused significant price volatility to which rating agencies have not reacted; and
- lack of liquidity is causing price quotes to vary significantly from broker to broker.

We believe that this bond selection approach provides the best estimate of discount rates to estimate settlement values for our plans' benefit obligations as required by applicable U.S. GAAP.

We develop the discount rate assumptions for the plans at IEnova by constructing a synthetic government zero coupon bond yield curve from the available market data, based on duration matching, and we add a risk spread to allow for the yields of high-quality corporate bonds. We develop the discount rate assumptions for the plans at Chilquinta Energía based on 10-year Chilean government bond yields and the expected local long-term rate of inflation. These methods for developing the discount rate are required when there is no deep market for high quality corporate bonds.

Long-term return on assets is based on the weighted-average of the plans' investment allocation as of the measurement date and the expected returns for those asset types.

Interest crediting rate is based on an average 30-year Treasury bond from the month of November of the preceding year.

We amortize prior service cost using straight line amortization over average future service (or average expected lifetime for plans where participants are substantially inactive employees), which is an alternative method allowed under U.S. GAAP.

The significant assumptions affecting benefit obligation and net periodic benefit cost are as follows:

WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE BENEFIT OBLIGATION AT DECEMBER 31

	Pension benefits		Other postretirement benefits	
	2018	2017	2018	2017
Sempra Energy Consolidated:				
Discount rate	4.30%	3.65%	4.30%	3.70%
Interest crediting rate ⁽¹⁾⁽²⁾	3.36	2.80	3.36	2.80
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SDG&E:				
Discount rate	4.29%	3.64%	4.30%	3.65%
Interest crediting rate ⁽¹⁾⁽²⁾	3.36	2.80	3.36	2.80
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SoCalGas:				
Discount rate	4.30%	3.65%	4.30%	3.70%
Interest crediting rate ⁽¹⁾⁽²⁾	3.36	2.80	3.36	2.80
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00

⁽¹⁾ Interest crediting rate for pension benefits applies only to funded cash balance plans.

⁽²⁾ Interest crediting rate for other postretirement benefits applies only to interest bearing health retirement accounts at SDG&E and SoCalGas.

**WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE NET PERIODIC BENEFIT COST
YEARS ENDED DECEMBER 31**

	Pension benefits			Other postretirement benefits		
	2018	2017	2016	2018	2017	2016
Sempra Energy Consolidated:						
Discount rate	3.65%	4.08%	4.46%	3.70%	4.19%	4.49%
Expected return on plan assets	7.00	7.00	7.00	6.49	6.47	6.98
Interest crediting rate ⁽¹⁾⁽²⁾	2.80	2.86	3.03	2.80	2.86	3.03
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SDG&E:						
Discount rate	3.64%	4.08%	4.35%	3.65%	4.15%	4.50%
Expected return on plan assets	7.00	7.00	7.00	6.94	6.91	6.90
Interest crediting rate ⁽¹⁾⁽²⁾	2.80	2.86	3.03	2.80	2.86	3.03
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SoCalGas:						
Discount rate	3.65%	4.10%	4.50%	3.70%	4.20%	4.50%
Expected return on plan assets	7.00	7.00	7.00	6.38	6.37	7.00
Interest crediting rate ⁽¹⁾⁽²⁾	2.80	2.86	3.03	2.80	2.86	3.03
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00

⁽¹⁾ Interest crediting rate for pension benefits applies only to funded cash balance plans.

⁽²⁾ Interest crediting rate for other postretirement benefits applies only to interest bearing health retirement accounts at SDG&E and SoCalGas.

Health Care Cost Trend Rates

Assumed health care cost trend rates have a significant effect on the amounts that we report for the health care plan costs. Following are the health care cost trend rates applicable to our postretirement benefit plans:

**ASSUMED HEALTH CARE COST TREND RATES
AT DECEMBER 31**

	Other postretirement benefit plans					
	Pre-65 retirees			Retirees aged 65 years and older		
	2018	2017	2016	2018	2017	2016
Health care cost trend rate assumed for next year	6.50%	7.00%	8.00%	4.75%	5.00%	5.50%
Rate to which the cost trend rate is assumed to decline (the ultimate trend)	4.75%	5.00%	5.00%	4.50%	4.50%	4.50%
Year the rate reaches the ultimate trend	2025	2022	2022	2022	2022	2022

Plan Assets

Investment Allocation Strategy for Sempra Energy's Pension Master Trust

Sempra Energy's pension master trust holds the investments for our pension plans and a portion of the investments for our PBOP plans. We maintain additional trusts, as we discuss below, for certain of the California Utilities' PBOP plans. Other than through indexing strategies, the trusts do not invest in securities of Sempra Energy.

The current asset allocation objective for the pension master trust is to protect the funded status of the plans while generating sufficient returns to cover future benefit payments and accruals. We assess the portfolio performance by comparing actual returns with relevant benchmarks. Currently, the pension plans' target asset allocations are:

- 35 percent domestic equity;
- 24 percent international equity;
- 18 percent long credit;
- 8 percent ultra-long duration government securities;
- 5 percent global real estate investment trusts;
- 5 percent return-seeking credit; and
- 5 percent real assets.

The asset allocation of the plans is reviewed by our Plan Funding Committee and our Pension and Benefits Investment Committee (the Committees) on a regular basis. When evaluating strategic asset allocations, the Committees consider many variables, including:

- long-term cost;
- variability and level of contributions;
- funded status; and
- a range of expected outcomes over varying confidence levels.

We maintain asset allocations at strategic levels with reasonable bands of variance.

In accordance with the Sempra Energy pension investment guidelines, derivative financial instruments may be used by the pension master trust's equity and fixed income portfolio investment managers to equitize cash, hedge certain exposures, and as substitutes for certain types of fixed income securities.

Rate of Return Assumption

The expected return on assets in our pension and PBOP plans is based on the weighted-average of the plans' investment allocations to specific asset classes as of the measurement date. We arrive at a 7-percent expected return on assets by considering both the historical and forecasted long-term rates of return on those asset classes. We expect a return of between 7 percent and 9 percent on return-seeking assets and between 3 percent and 5 percent for risk-mitigating assets. Certain trusts that hold assets for the SDG&E other postretirement benefit plan are subject to taxation, which impacts the expected after-tax return on assets in the plan.

Concentration of Risk

Plan assets are diversified across global equity and bond markets, and concentration of risk in any one economic, industry, maturity or geographic sector is limited.

Investment Strategy for SDG&E's and SoCalGas' Other Postretirement Benefit Plans

SDG&E's and SoCalGas' PBOP plans are funded by cash contributions from SDG&E and SoCalGas and their current retirees. The assets of these plans are placed into the pension master trust and other Voluntary Employee Beneficiary Association trusts. Certain assets of SoCalGas' PBOP plans, which are held in the pension master trust, are invested based on an allocation that seeks to mitigate risks for the assets of these plans, with 38 percent invested in return-seeking and 62 percent invested in risk-mitigating assets. The assets in the Voluntary Employee Beneficiary Association trusts are invested at an allocation similar to the pension master trust, with 74 percent invested in return-seeking and 26 percent invested in risk-mitigating assets. These allocations are periodically reviewed to ensure that plan assets are best positioned to meet plan obligations.

Fair Value of Pension and Other Postretirement Benefit Plan Assets

We classify the investments in Sempra Energy's pension master trust and the trusts for the California Utilities' PBOP plans based on the fair value hierarchy, except for certain investments measured at NAV.

The following are descriptions of the valuation methods and assumptions we use to estimate the fair values of investments held by pension and other postretirement benefit plan trusts.

Equity Securities – Equity securities are valued using quoted prices listed on nationally recognized securities exchanges.

Fixed Income Securities – Certain fixed income securities are valued at the closing price reported in the active market in which the security is traded. Other fixed income securities are valued based on yields currently available on comparable securities of issuers with similar credit ratings. When quoted prices are not available for identical or similar securities, the security is valued under a discounted cash flow approach that maximizes observable inputs, such as current yields of similar instruments, but includes adjustments for certain risks that may not be observable, such as credit and liquidity risks. Certain high yield fixed-income securities are valued by applying a price adjustment to the bid side to calculate a mean and ask value. Adjustments can vary based on maturity, credit standing, and reported trade frequencies. The bid to ask spread is determined by the investment manager based on the review of the available market information.

Registered Investment Companies – Investments in mutual funds sponsored by a registered investment company are valued based on exchange listed prices. Where the value is a quoted price in an active market, the investment is classified within Level 1 of the fair value hierarchy. Investments in certain fixed income securities are valued under a discounted cash flow

approach that maximizes observable inputs, such as current yields of similar instruments, but includes adjustments for certain risks that may not be observable, such as credit and liquidity risks for the remaining fixed income securities.

Common/Collective Trusts – Investments in common/collective trust funds are valued based on the NAV of units owned, which is based on the current fair value of the funds' underlying assets.

Private Equity Funds – These funds consist of investments in private equities that are held by limited partnerships following various strategies, including private equity and corporate finance. These partnerships generally have limited lives of 10 years, after which liquidating distributions will be received. The value is determined based on the NAV of the proportionate share of an ownership interest in partners' capital. Holdings in these types of private equity funds are negligible, as the funds are well past their expected investment term and have distributed the bulk of proceeds from investment sales.

Derivative Financial Instruments – Futures contracts that are publicly traded in active markets are valued at closing prices as of the last business day of the year. Forward currency contracts are valued at the prevailing forward exchange rate of the underlying currencies, and unrealized gain (loss) is recorded daily. Fixed income futures and options are marked to market daily. Equity index futures contracts are valued at the last sales price quoted on the exchange on which they primarily trade.

While management believes the valuation methods described above are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

We provide more discussion of fair value measurements in Notes 1 and 12. The following tables set forth by level within the fair value hierarchy a summary of the investments in our pension and other postretirement benefit plan trusts measured at fair value on a recurring basis.

SDG&E and SoCalGas each hold a proportionate share of investment assets in the pension master trust at Sempra Energy Consolidated. The fair values of our pension plan assets by asset category are as follows:

FAIR VALUE MEASUREMENTS – INVESTMENT ASSETS OF PENSION PLANS
(Dollars in millions)

	Fair value at December 31, 2018		
	Level 1	Level 2	Total
Sempra Energy Consolidated:			
Equity securities:			
Domestic	\$ 727	\$ —	\$ 727
International	437	—	437
Registered investment companies	74	—	74
Fixed income securities:			
Domestic government bonds	197	29	226
International government bonds	—	8	8
Domestic corporate bonds	—	311	311
International corporate bonds	—	53	53
Registered investment companies	—	1	1
Total investment assets in the fair value hierarchy	<u>\$ 1,435</u>	<u>\$ 402</u>	1,837
Investments measured at NAV:			
Common/collective trusts			326
Private equity funds			4
Total investment assets ⁽¹⁾			<u>\$ 2,167</u>
SDG&E's proportionate share of investment assets			\$ 602
SoCalGas' proportionate share of investment assets			\$ 1,389

	Fair value at December 31, 2017		
	Level 1	Level 2	Total
Sempra Energy Consolidated:			
Equity securities:			
Domestic	\$ 946	\$ —	\$ 946
International	538	—	538
Registered investment companies	102	—	102
Fixed income securities:			
Domestic government bonds	242	27	269
International government bonds	—	12	12
Domestic corporate bonds	—	338	338
International corporate bonds	—	64	64
Registered investment companies	—	6	6
Other	—	1	1
Total investment assets in the fair value hierarchy	<u>\$ 1,828</u>	<u>\$ 448</u>	2,276
Investments measured at NAV:			
Common/collective trusts			384
Private equity funds			4
Total investment assets ⁽²⁾			<u>\$ 2,664</u>
SDG&E's proportionate share of investment assets			\$ 777
SoCalGas' proportionate share of investment assets			\$ 1,697

⁽¹⁾ Excludes cash and cash equivalents of \$14 million and accounts payable of \$21 million.

⁽²⁾ Excludes cash and cash equivalents of \$13 million and accounts payable of \$18 million.

The fair values by asset category of the PBOP plan assets held in the pension master trust and in the additional trusts for SoCalGas' PBOP plans and SDG&E's PBOP plan trusts are as follows:

FAIR VALUE MEASUREMENTS – INVESTMENT ASSETS OF OTHER POSTRETIREMENT BENEFIT PLANS

(Dollars in millions)

	Fair value at December 31, 2018		
	Level 1	Level 2	Total
SDG&E:			
Equity securities:			
Domestic	\$ 37	\$ —	\$ 37
International	22	—	22
Registered investment companies	59	—	59
Fixed income securities:			
Domestic government bonds	10	1	11
Domestic corporate bonds	—	16	16
International corporate bonds	—	3	3
Registered investment companies	—	7	7
Total investment assets in the fair value hierarchy	128	27	155
Investments measured at NAV – Common/collective trusts			17
Total investment assets ⁽¹⁾			172
SoCalGas:			
Equity securities:			
Domestic	66	—	66
International	39	—	39
Registered investment companies	62	—	62
Fixed income securities:			
Domestic government bonds	236	13	249
International government bonds	1	4	5
Domestic corporate bonds	—	175	175
International corporate bonds	—	21	21
Registered investment companies	—	64	64
Derivative financial instruments	(4)	—	(4)
Total investment assets in the fair value hierarchy	400	277	677
Investments measured at NAV – Common/collective trusts			237
Total investment assets ⁽²⁾			914
Other Sempra Energy:			
Equity securities:			
Domestic	6	—	6
International	4	—	4
Fixed income securities:			
Domestic government bonds	2	—	2
Domestic corporate bonds	—	2	2
Registered investment companies	—	1	1
Total investment assets in the fair value hierarchy	12	3	15
Investments measured at NAV – Common/collective trusts			4
Private equity funds			1
Total other Sempra Energy investment assets			20
Total Sempra Energy Consolidated investment assets in the fair value hierarchy	\$ 540	\$ 307	
Total Sempra Energy Consolidated investment assets ⁽³⁾			\$ 1,106

⁽¹⁾ Excludes cash and cash equivalents of \$1 million and accounts payable of \$1 million held in SDG&E PBOP plan trusts.

⁽²⁾ Excludes cash and cash equivalents of \$6 million and accounts payable of \$4 million held in SoCalGas PBOP plan trusts.

⁽³⁾ Excludes cash and cash equivalents of \$7 million and accounts payable of \$5 million at Sempra Energy Consolidated.

FAIR VALUE MEASUREMENTS – INVESTMENT ASSETS OF OTHER POSTRETIREMENT BENEFIT PLANS
(Dollars in millions)

	Fair value at December 31, 2017		
	Level 1	Level 2	Total
SDG&E:			
Equity securities:			
Domestic	\$ 46	\$ —	\$ 46
International	26	—	26
Registered investment companies	52	—	52
Fixed income securities:			
Domestic government bonds	12	1	13
International government bonds	—	1	1
Domestic corporate bonds	—	17	17
International corporate bonds	—	3	3
Registered investment companies	—	17	17
Total investment assets in the fair value hierarchy	136	39	175
Investments measured at NAV – Common/collective trusts			20
Total investment assets ⁽¹⁾			195
SoCalGas:			
Equity securities:			
Domestic	78	—	78
International	44	—	44
Registered investment companies	41	—	41
Fixed income securities:			
Domestic government bonds	125	13	138
International government bonds	—	7	7
Domestic corporate bonds	—	164	164
International corporate bonds	—	28	28
Registered investment companies	—	85	85
Total investment assets in the fair value hierarchy	288	297	585
Investments measured at NAV – Common/collective trusts			406
Total investment assets ⁽²⁾			991
Other Sempra Energy:			
Equity securities:			
Domestic	7	—	7
International	5	—	5
Registered investment companies	1	—	1
Fixed income securities:			
Domestic government bonds	1	1	2
Domestic corporate bonds	—	2	2
International corporate bonds	—	1	1
Total investment assets in the fair value hierarchy	14	4	18
Investments measured at NAV – Common/collective trusts			2
Private equity funds			1
Total other Sempra Energy investment assets			21
Total Sempra Energy Consolidated investment assets in the fair value hierarchy	\$ 438	\$ 340	
Total Sempra Energy Consolidated investment assets ⁽³⁾			\$ 1,207

⁽¹⁾ Excludes cash and cash equivalents of \$1 million and accounts payable of \$1 million held in SDG&E PBOP plan trusts.

⁽²⁾ Excludes cash and cash equivalents of \$4 million and accounts payable of \$2 million held in SoCalGas PBOP plan trusts.

⁽³⁾ Excludes cash and cash equivalents of \$5 million and accounts payable of \$3 million at Sempra Energy Consolidated.

Future Payments

We expect to contribute the following amounts to our pension and PBOP plans in 2019:

EXPECTED CONTRIBUTIONS			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated	SDG&E	SoCalGas
Pension plans	\$ 228	\$ 40	\$ 118
Other postretirement benefit plans	10	—	1

The following table shows the total benefits we expect to pay for the next 10 years to current employees and retirees from the plans or from company assets.

EXPECTED BENEFIT PAYMENTS						
<i>(Dollars in millions)</i>						
	Sempra Energy Consolidated		SDG&E		SoCalGas	
	Pension benefits	Other postretirement benefits	Pension benefits	Other postretirement benefits	Pension benefits	Other postretirement benefits
2019	\$ 416	\$ 54	\$ 109	\$ 10	\$ 207	\$ 36
2020	270	51	69	10	159	36
2021	268	52	64	10	154	37
2022	246	52	61	11	152	37
2023	236	52	62	11	149	38
2024-2028	1,097	257	282	51	698	187

PROFIT SHARING PLANS

Under Chilean law, Chilquinta Energía is required to pay all employees either (1) 30 percent of Chilquinta Energía's taxable income after deducting a 10-percent ROE, allocated in proportion to the annual salary of each employee or (2) 25 percent of each employee's annual salary, with a maximum mandatory profit sharing of 4.75 months of Chile's legal minimum salary. Chilquinta Energía has elected the second option but calculates the profit sharing amounts with actual employee salaries instead of the legal minimum salary, resulting in a higher cost. The amounts are paid out each pay period. Chilquinta Energía recorded annual profit sharing expense of \$7 million, \$7 million and \$5 million in 2018, 2017 and 2016, respectively, related to this plan.

Under Peruvian law, Luz del Sur is required to pay their employees 5 percent of Luz del Sur's taxable income, paid once a year and allocated as follows: 50 percent based on each employee's annual hours worked and 50 percent based on each employee's annual salary. Luz del Sur recorded annual profit sharing expense of \$13 million, \$12 million and \$10 million in 2018, 2017 and 2016, respectively, related to this plan.

SAVINGS PLANS

Sempra Energy offers trustee savings plans to all domestic employees, all employees in Mexico and certain employees in Chile. Employee participation, employee contributions and employer matching contributions are subject to the provisions of the respective plans, and for employee contributions, limits imposed by the respective governmental authorities.

Employer contributions to the savings plans were as follows:

EMPLOYER CONTRIBUTIONS TO SAVINGS PLANS			
<i>(Dollars in millions)</i>			
	2018	2017	2016
Sempra Energy Consolidated	\$ 43	\$ 41	\$ 42
SDG&E	15	14	15
SoCalGas	23	22	22

The market value of Sempra Energy common stock held by the savings plans was \$1.0 billion and \$1.1 billion at December 31, 2018 and 2017, respectively.

NOTE 10. SHARE-BASED COMPENSATION

SEMPRA ENERGY EQUITY COMPENSATION PLANS

Sempra Energy has share-based compensation plans intended to align employee and shareholder objectives related to the long-term growth of Sempra Energy. The plans permit a wide variety of share-based awards, including:

- non-qualified stock options;
- incentive stock options;
- restricted stock awards;
- restricted stock units;
- stock appreciation rights;
- performance awards;
- stock payments; and
- dividend equivalents.

Eligible employees, including those from the California Utilities, participate in Sempra Energy's share-based compensation plans as a component of their compensation package.

In the three years ended December 31, 2018, Sempra Energy had the following types of equity awards outstanding:

- *Non-Qualified Stock Options*: Options to purchase common stock have an exercise price equal to the market price of the common stock at the date of grant, are service-based, become exercisable over a four-year period, and expire 10 years from the date of grant. Vesting and/or the ability to exercise may be accelerated upon a change in control, in accordance with severance pay agreements or in accordance with the terms of the grant. Options are subject to forfeiture or earlier expiration following termination of employment, subject to certain exceptions.
- *Performance-Based Restricted Stock Units*: These RSU awards generally vest in Sempra Energy common stock at the end of three-year (for awards granted during or after 2015) or four-year performance periods (for awards granted prior to 2015) based on Sempra Energy's total return to shareholders relative to that of specified market indices or based on the compound annual growth rate of Sempra Energy's EPS. The comparative market indices for the awards that vest based on total return to shareholders are the S&P 500 Utilities Index and the S&P 500 Index. We use long-term analyst consensus growth estimates for S&P 500 Utilities Index peer companies to develop our targets for awards that vest based on EPS growth.
 - For awards granted in 2013 or earlier, if Sempra Energy's total return to shareholders exceeds target levels, up to an additional 50 percent of the number of granted RSUs may be issued.
 - For awards granted during or after 2014, up to an additional 100 percent of the granted RSUs may be issued if total return to shareholders or EPS growth exceeds target levels.
 - For awards granted in 2015 and 2016 and certain awards granted in 2017 and 2018 that vest based on Sempra Energy's total return to shareholders, a modifier adds 20 percent to the award's payout (as initially calculated based on total return to shareholders relative to that of specified market indices) for total shareholder return performance in the top quartile relative to historical benchmark data for Sempra Energy and reduces the award's payout by 20 percent for performance in the bottom quartile. However, in no event will more than an additional 100 percent of the granted RSUs be issued. If performance falls within the second or third quartiles, the modifier is not triggered, and the payout is based solely on total return to shareholders relative to that of specified market indices.

If Sempra Energy's total return to shareholders or EPS growth is below the target levels but above threshold performance levels, shares are subject to partial vesting on a pro rata basis.

- *Other Performance-Based Restricted Stock Units*: RSUs were granted in 2014 and 2015 in connection with the creation of Cameron LNG JV.
 - The 2014 awards vested to the extent that the Compensation Committee of Sempra Energy's board of directors determined that the objectives of the JV were achieved. Those awards vested on the anniversary of the grant date over a period of either two or three years.
 - The 2015 awards are expected to vest to the extent that both of the following are achieved: (a) the Compensation Committee of Sempra Energy's board of directors determines that Sempra Energy has achieved positive cumulative net income for fiscal years 2015 through 2017 and (b) Cameron LNG JV has commenced commercial operations of the first train.
- *Service-Based Restricted Stock Units*: RSUs may also be service-based; these generally vest at the end of three-year (for awards granted during or after 2015 through 2018) or four-year service periods (for awards granted prior to 2015).

- *Restricted Stock Awards:* RSAs are solely service-based and generally vest at the end of four years of service. Accelerated vesting of RSAs may occur upon eligibility for retirement. Holders of RSAs have full voting rights.

For RSA and RSU awards, vesting may be subject to earlier forfeiture upon termination of employment and accelerated vesting upon a change in control under the applicable long-term incentive plan, in accordance with severance pay agreements, or at the discretion of the Compensation Committee of Sempra Energy's board of directors. Dividend equivalents on shares subject to RSAs and RSUs are reinvested to purchase additional common shares that become subject to the same vesting conditions as the RSAs and RSUs to which the dividends relate.

The IEnova 2013 Long-Term Incentive Plan is intended to align the interests of employees and directors of IEnova with its shareholders. All awards issued from this plan and any related dividend equivalents will settle in cash at vesting based on the price of IEnova common stock. In 2018, 2017 and 2016, IEnova granted 966,747 RSUs, 1,043,709 RSUs and 378,367 RSUs, respectively, from this plan, 696,787 of which remain outstanding at December 31, 2018. In 2018, 2017 and 2016, IEnova paid cash of \$3 million, \$2 million and \$1 million, respectively, to settle vested awards.

SHARE-BASED AWARDS AND COMPENSATION EXPENSE

At December 31, 2018, 6,067,767 common shares were authorized and available for future grants of share-based awards. Our practice is to satisfy share-based awards by issuing new shares rather than by open-market purchases.

We measure and recognize compensation expense for all share-based payment awards made to our employees and directors based on estimated fair values on the date of grant. We recognize compensation costs net of an estimated forfeiture rate (based on historical experience) and recognize the compensation costs for non-qualified stock options, RSAs and RSUs on a straight-line basis over the requisite service period of the award, which is generally three or four years. However, for awards granted to retirement-eligible participants, the expense is recognized over the initial year in which the award was granted. For awards granted to participants who become eligible for retirement during the requisite service period, the expense is recognized over the period between the date of grant and the later of the end of the year in which the award was granted or the date the participant first becomes eligible for retirement. Substantially all awards outstanding are classified as equity instruments; therefore, we recognize additional paid in capital as we recognize the compensation expense associated with the awards. We recognize in earnings the tax benefits (or deficiencies) resulting from tax deductions that are in excess of (or less than) tax benefits related to compensation cost recognized for share-based payments.

Sempra Energy subsidiaries record an expense for the plans to the extent that subsidiary employees participate in the plans and/or the subsidiaries are allocated a portion of the Sempra Energy plans' corporate staff costs. Total share-based compensation expense for all of Sempra Energy's share-based awards was comprised as follows:

SHARE-BASED COMPENSATION EXPENSE

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated:			
Share-based compensation expense, before income taxes	\$ 76	\$ 78	\$ 46
Income tax benefit	(21)	(31)	(18)
	<u>\$ 55</u>	<u>\$ 47</u>	<u>\$ 28</u>
Capitalized share-based compensation cost	\$ 10	\$ 9	\$ 7
Excess income tax deficiency (benefit)	\$ 15	\$ —	\$ (34)
SDG&E:			
Share-based compensation expense, before income taxes	\$ 12	\$ 13	\$ 7
Income tax benefit	(3)	(5)	(3)
	<u>\$ 9</u>	<u>\$ 8</u>	<u>\$ 4</u>
Capitalized share-based compensation cost	\$ 6	\$ 5	\$ 4
Excess income tax deficiency (benefit)	\$ 3	\$ —	\$ (7)
SoCalGas:			
Share-based compensation expense, before income taxes	\$ 16	\$ 17	\$ 8
Income tax benefit	(5)	(7)	(3)
	<u>\$ 11</u>	<u>\$ 10</u>	<u>\$ 5</u>
Capitalized share-based compensation cost	\$ 4	\$ 4	\$ 3
Excess income tax deficiency (benefit)	\$ 2	\$ —	\$ (4)

SEMPRA ENERGY NON-QUALIFIED STOCK OPTIONS

We use a Black-Scholes option-pricing model to estimate the fair value of each non-qualified stock option grant. The use of a valuation model requires us to make certain assumptions about selected model inputs. Expected volatility is calculated based on the historical volatility of Sempra Energy's common stock price. We base the average expected life for options on the contractual term of the option and expected employee exercise and post-termination behavior. The risk-free interest rate is based on U.S. Treasury zero-coupon issues with a remaining term equal to the expected life assumed at the date of the grant.

The following table shows a summary of non-qualified stock options at December 31, 2018 and activity for the year then ended:

NON-QUALIFIED STOCK OPTIONS

	Common shares under option	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2018	195,801	\$ 50.30		
Exercised	<u>(138,861)</u>	<u>48.53</u>		
Outstanding at December 31, 2018	<u>56,940</u>	\$ 54.63	0.9	\$ 3
Vested at December 31, 2018	56,940	\$ 54.63	0.9	\$ 3
Exercisable at December 31, 2018	56,940	\$ 54.63	0.9	\$ 3

The aggregate intrinsic value at December 31, 2018 is the total of the difference between Sempra Energy's closing common stock price and the exercise price for all in-the-money options. The aggregate intrinsic value for non-qualified stock options exercised in the last three years was:

- \$9 million in 2018;

- \$9 million in 2017; and
- \$8 million in 2016.

We have not granted any stock options since 2010, though in January 2019, we granted non-qualified stock options to several executive officers of Sempra Energy. All outstanding stock options at December 31, 2018 are fully vested and compensation cost on such stock options was fully recognized by December 31, 2014.

We received cash of \$7 million from stock option exercises during 2018.

SEMPRA ENERGY RESTRICTED STOCK AWARDS AND UNITS

We use a Monte-Carlo simulation model to estimate the fair value of our RSAs and for our RSUs that vest based on Sempra Energy's total return to shareholders. Our determination of fair value is affected by the historical volatility of the common stock price for Sempra Energy and its peer group companies. The valuation also is affected by the risk-free rates of return, and a number of other variables. Below are key assumptions for Sempra Energy awards granted in the last three years:

KEY ASSUMPTIONS FOR AWARDS GRANTED

	Years ended December 31,		
	2018	2017	2016
Risk-free rate of return	2.0%	1.5%	1.3%
Stock price volatility	17	17	16

Restricted Stock Awards

We have not granted any RSAs since 2013. All outstanding RSAs were fully vested and all compensation cost related to RSAs had been recognized by December 31, 2016. The total fair value of RSA shares vested in 2016 was negligible.

Restricted Stock Units

We provide below a summary of Sempra Energy's RSUs as of December 31, 2018 and the activity during the year.

RESTRICTED STOCK UNITS

	Performance-based restricted stock units		Service-based restricted stock units	
	Units	Weighted-average grant-date fair value	Units	Weighted-average grant-date fair value
Nonvested at January 1, 2018	1,701,617	\$ 105.84	285,895	\$ 98.81
Granted	358,363	\$ 105.03	288,474	\$ 107.60
Vested	(157,745)	\$ 99.42	(163,609)	\$ 100.60
Forfeited	(660,066)	\$ 106.45	(8,399)	\$ 103.32
Nonvested at December 31, 2018 ⁽¹⁾	<u>1,242,169</u>	\$ 106.11	<u>402,361</u>	\$ 105.01
Expected to vest at December 31, 2018	1,211,529	\$ 105.47	396,358	\$ 104.26

⁽¹⁾ Each RSU represents the right to receive one share of our common stock if applicable performance conditions are satisfied. For all performance-based RSUs, except for those issued in connection with the creation of Cameron LNG JV, up to an additional 100 percent of the shares represented by the RSUs may be issued if Sempra Energy exceeds target performance conditions.

In 2018, 2017 and 2016, the total fair value of RSU shares vested during the year was \$32 million, \$45 million and \$46 million, respectively.

The \$24 million of total compensation cost related to nonvested RSUs not yet recognized as of December 31, 2018 is expected to be recognized over a weighted-average period of 1.8 years. The weighted-average per-share fair values for performance-based RSUs granted were \$110.54 and \$100.37 in 2017 and 2016, respectively. The weighted-average per-share fair values for service-based RSUs granted were \$101.88 and \$93.59 in 2017 and 2016, respectively.

NOTE 11. DERIVATIVE FINANCIAL INSTRUMENTS

We use derivative instruments primarily to manage exposures arising in the normal course of business. Our principal exposures are commodity market risk, benchmark interest rate risk and foreign exchange rate exposures. Our use of derivatives for these risks is integrated into the economic management of our anticipated revenues, anticipated expenses, assets and liabilities. Derivatives may be effective in mitigating these risks (1) that could lead to declines in anticipated revenues or increases in anticipated expenses, or (2) that our asset values may fall or our liabilities increase. Accordingly, our derivative activity summarized below generally represents an impact that is intended to offset associated revenues, expenses, assets or liabilities that are not included in the tables below.

In certain cases, we apply the normal purchase or sale exception to derivative instruments and have other commodity contracts that are not derivatives. These contracts are not recorded at fair value and are therefore excluded from the disclosures below.

In all other cases, we record derivatives at fair value on the Consolidated Balance Sheets. We designate each derivative as (1) a cash flow hedge, (2) a fair value hedge, or (3) undesignated. Depending on the applicability of hedge accounting and, for the California Utilities and other operations subject to regulatory accounting, the requirement to pass impacts through to customers, the impact of derivative instruments may be offset in OCI (cash flow hedge), on the balance sheet (fair value hedges and regulatory offsets), or recognized in earnings. We classify cash flows from the principal settlements of cross-currency swaps that hedge exposure related to Mexican peso-denominated debt as financing activities and settlements of other derivative instruments as operating activities on the Consolidated Statements of Cash Flows.

HEEDGE ACCOUNTING

We may designate a derivative as a cash flow hedging instrument if it effectively converts anticipated cash flows associated with revenues or expenses to a fixed dollar amount. We may utilize cash flow hedge accounting for derivative commodity instruments, foreign currency instruments and interest rate instruments. Designating cash flow hedges is dependent on the business context in which the instrument is being used, the effectiveness of the instrument in offsetting the risk that the future cash flows of a given revenue or expense item may vary, and other criteria.

We may designate an interest rate derivative as a fair value hedging instrument if it effectively converts our own debt from a fixed interest rate to a variable rate. The combination of the derivative and debt instrument results in fixing that portion of the fair value of the debt that is related to benchmark interest rates. Designating fair value hedges is dependent on the instrument being used, the effectiveness of the instrument in offsetting changes in the fair value of our debt instruments, and other criteria.

ENERGY DERIVATIVES

Our market risk is primarily related to natural gas and electricity price volatility and the specific physical locations where we transact. We use energy derivatives to manage these risks. The use of energy derivatives in our various businesses depends on the particular energy market and the operating and regulatory environments applicable to the business, as follows:

- The California Utilities use natural gas and electricity derivatives, for the benefit of customers, with the objective of managing price risk and basis risks, and stabilizing and lowering natural gas and electricity costs. These derivatives include fixed price natural gas and electricity positions, options, and basis risk instruments, which are either exchange-traded or over-the-counter financial instruments, or bilateral physical transactions. This activity is governed by risk management and transacting activity plans that have been filed with and approved by the CPUC. Natural gas and electricity derivative activities are recorded as commodity costs that are offset by regulatory account balances and are recovered in rates. Net commodity cost impacts on the Consolidated Statements of Operations are reflected in Cost of Electric Fuel and Purchased Power or in Cost of Natural Gas.
- SDG&E is allocated and may purchase CRRs, which serve to reduce the regional electricity price volatility risk that may result from local transmission capacity constraints. Unrealized gains and losses do not impact earnings, as they are offset by regulatory account balances. Realized gains and losses associated with CRRs, which are recoverable in rates, are recorded in Cost of Electric Fuel and Purchased Power on the Consolidated Statements of Operations.
- Sempra Mexico, Sempra LNG & Midstream and Sempra Renewables may use natural gas and electricity derivatives, as appropriate, to optimize the earnings of their assets which support the following businesses: LNG, natural gas transportation and storage, and power generation. Gains and losses associated with undesignated derivatives are recognized in Energy-Related Businesses Revenues or in Cost of Natural Gas, Electric Fuel and Purchased Power on the Consolidated Statements of Operations. Certain of these derivatives may also be designated as cash flow hedges. Sempra Mexico may also use natural gas energy derivatives with the objective of managing price risk and lowering natural gas prices at its distribution operations. These derivatives, which are recorded as commodity costs that are offset by regulatory account balances and recovered in rates, are recognized in Cost of Natural Gas on the Consolidated Statements of Operations.
- From time to time, our various businesses, including the California Utilities, may use other energy derivatives to hedge exposures such as the price of vehicle fuel and GHG allowances.

The following table summarizes net energy derivative volumes.

NET ENERGY DERIVATIVE VOLUMES			
<i>(Quantities in millions)</i>			
Commodity	Unit of measure	December 31,	
		2018	2017
Sempra Energy Consolidated:			
Natural gas	MMBtu	35	46
Electricity	MWh	2	3
Congestion revenue rights	MWh	52	59
SDG&E:			
Natural gas	MMBtu	33	39
Electricity	MWh	2	3
Congestion revenue rights	MWh	52	59

In addition to the amounts noted above, we frequently use commodity derivatives to manage risks associated with the physical locations of contractual obligations and assets, such as natural gas purchases and sales.

INTEREST RATE DERIVATIVES

We are exposed to interest rates primarily as a result of our current and expected use of financing. The California Utilities, as well as Sempra Energy and its other subsidiaries and JVs, periodically enter into interest rate derivative agreements intended to moderate our exposure to interest rates and to lower our overall costs of borrowing. We may utilize interest rate swaps, typically designated as fair value hedges, as a means to achieve our targeted level of variable rate debt as a percent of total debt. In addition, we may utilize interest rate swaps, typically designated as cash flow hedges, to lock in interest rates on outstanding debt or in anticipation of future financings. Separately, Otay Mesa VIE has entered into interest rate swap agreements, designated as cash flow hedges, to moderate its exposure to interest rate changes.

The following table presents the net notional amounts of our interest rate derivatives, excluding JVs.

INTEREST RATE DERIVATIVES					
<i>(Dollars in millions)</i>					
	December 31, 2018		December 31, 2017		
	Notional debt	Maturities	Notional debt	Maturities	
Sempra Energy Consolidated:					
Cash flow hedges ⁽¹⁾⁽²⁾	\$ 594	2019-2032	\$ 861	2018-2032	
SDG&E:					
Cash flow hedge ⁽¹⁾⁽²⁾	142	2019	295	2018-2019	

⁽¹⁾ Includes Otoy Mesa VIE. All of SDG&E's interest rate derivatives relate to Otoy Mesa VIE.

⁽²⁾ In December 2018, OMEC LLC entered into new floating-to-fixed interest rate swaps with notional amounts of \$159 million effective April 30, 2019 through October 31, 2019, and \$142 million effective October 31, 2019 through October 31, 2023.

FOREIGN CURRENCY DERIVATIVES

We utilize cross-currency swaps to hedge exposure related to Mexican peso-denominated debt at our Mexican subsidiaries and JVs. These cash flow hedges exchange our Mexican peso-denominated principal and interest payments into the U.S. dollar and swap Mexican variable interest rates for U.S. fixed interest rates. From time to time, Sempra Mexico and its JVs may use other foreign currency derivatives to hedge exposures related to cash flows associated with revenues from contracts denominated in Mexican pesos that are indexed to the U.S. dollar.

We are also exposed to exchange rate movements at our Mexican subsidiaries and JVs, which have U.S. dollar-denominated cash balances, receivables, payables and debt (monetary assets and liabilities) that give rise to Mexican currency exchange rate movements for Mexican income tax purposes. They also have deferred income tax assets and liabilities denominated in the Mexican peso, which must be translated to U.S. dollars for financial reporting purposes. In addition, monetary assets and liabilities and certain nonmonetary assets and liabilities are adjusted for Mexican inflation for Mexican income tax purposes. We utilize foreign currency derivatives as a means to manage the risk of exposure to significant fluctuations in our income tax expense and equity earnings from these impacts; however, we generally do not hedge our deferred income tax assets and liabilities or for inflation. In addition, Sempra South American Utilities and its JVs may use foreign currency derivatives to manage foreign currency rate risk.

The following table presents the net notional amounts of our foreign currency derivatives, excluding JVs.

FOREIGN CURRENCY DERIVATIVES					
<i>(Dollars in millions)</i>					
	December 31, 2018		December 31, 2017		
	Notional amount	Maturities	Notional amount	Maturities	
Sempra Energy Consolidated:					
Cross-currency swaps	\$ 306	2019-2023	\$ 408	2018-2023	
Other foreign currency derivatives	1,158	2019-2020	345	2018-2019	

FINANCIAL STATEMENT PRESENTATION

The Consolidated Balance Sheets reflect the offsetting of net derivative positions and cash collateral with the same counterparty when a legal right of offset exists. The following tables provide the fair values of derivative instruments on the Consolidated Balance Sheets at December 31, 2018 and 2017, including the amount of cash collateral receivables that were not offset, as the cash collateral was in excess of liability positions.

DERIVATIVE INSTRUMENTS ON THE CONSOLIDATED BALANCE SHEETS
(Dollars in millions)

December 31, 2018

	Current assets: Other ⁽¹⁾	Other assets: Sundry	Current liabilities: Other	Deferred credits and other liabilities: Deferred credits and other
Sempra Energy Consolidated:				
Derivatives designated as hedging instruments:				
Interest rate and foreign exchange instruments ⁽²⁾	\$ 2	\$ —	\$ (3)	\$ (147)
Derivatives not designated as hedging instruments:				
Commodity contracts not subject to rate recovery	153	7	(164)	(6)
Associated offsetting commodity contracts	(133)	(3)	133	3
Commodity contracts subject to rate recovery	64	233	(42)	(72)
Associated offsetting commodity contracts	(6)	(2)	6	2
Associated offsetting cash collateral	—	—	—	2
Net amounts presented on the balance sheet	80	235	(70)	(218)
Additional cash collateral for commodity contracts not subject to rate recovery	19	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	33	—	—	—
Total ⁽³⁾	\$ 132	\$ 235	\$ (70)	\$ (218)
SDG&E:				
Derivatives designated as hedging instruments:				
Interest rate instruments ⁽²⁾	\$ —	\$ —	\$ (1)	\$ —
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	60	233	(37)	(72)
Associated offsetting commodity contracts	(6)	(2)	6	2
Associated offsetting cash collateral	—	—	—	2
Net amounts presented on the balance sheet	54	231	(32)	(68)
Additional cash collateral for commodity contracts subject to rate recovery	28	—	—	—
Total ⁽³⁾	\$ 82	\$ 231	\$ (32)	\$ (68)
SoCalGas:				
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	\$ 4	\$ —	\$ (5)	\$ —
Net amounts presented on the balance sheet	4	—	(5)	—
Additional cash collateral for commodity contracts subject to rate recovery	5	—	—	—
Total	\$ 9	\$ —	\$ (5)	\$ —

⁽¹⁾ Included in Current Assets: Fixed-Price Contracts and Other Derivatives for SDG&E.

⁽²⁾ Includes Otay Mesa VIE. All of SDG&E's amounts relate to Otay Mesa VIE.

⁽³⁾ Normal purchase contracts previously measured at fair value are excluded.

DERIVATIVE INSTRUMENTS ON THE CONSOLIDATED BALANCE SHEETS
(Dollars in millions)

December 31, 2017

	Current assets: Other ⁽¹⁾	Other assets: Sundry	Current liabilities: Other	Deferred credits and other liabilities: Deferred credits and other
Sempra Energy Consolidated:				
Derivatives designated as hedging instruments:				
Interest rate and foreign exchange instruments ⁽²⁾	\$ 5	\$ 2	\$ (51)	\$ (165)
Derivatives not designated as hedging instruments:				
Foreign exchange instruments	—	—	(1)	—
Commodity contracts not subject to rate recovery	81	8	(72)	(6)
Associated offsetting commodity contracts	(67)	(5)	67	5
Commodity contracts subject to rate recovery	28	101	(65)	(120)
Associated offsetting commodity contracts	—	(1)	—	1
Associated offsetting cash collateral	—	—	19	4
Net amounts presented on the balance sheet	47	105	(103)	(281)
Additional cash collateral for commodity contracts not subject to rate recovery	2	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	17	—	—	—
Total ⁽³⁾	\$ 66	\$ 105	\$ (103)	\$ (281)
SDG&E:				
Derivatives designated as hedging instruments:				
Interest rate instruments ⁽²⁾	\$ —	\$ —	\$ (10)	\$ (3)
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	26	101	(63)	(120)
Associated offsetting commodity contracts	—	(1)	—	1
Associated offsetting cash collateral	—	—	19	4
Net amounts presented on the balance sheet	26	100	(54)	(118)
Additional cash collateral for commodity contracts subject to rate recovery	16	—	—	—
Total ⁽³⁾	\$ 42	\$ 100	\$ (54)	\$ (118)
SoCalGas:				
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	\$ 2	\$ —	\$ (2)	\$ —
Net amounts presented on the balance sheet	2	—	(2)	—
Additional cash collateral for commodity contracts subject to rate recovery	1	—	—	—
Total	\$ 3	\$ —	\$ (2)	\$ —

⁽¹⁾ Included in Current Assets: Fixed-Price Contracts and Other Derivatives for SDG&E.

⁽²⁾ Includes Otay Mesa VIE. All of SDG&E's amounts relate to Otay Mesa VIE.

⁽³⁾ Normal purchase contracts previously measured at fair value are excluded.

The table below presents the effects of derivative instruments designated as fair value hedges on the Consolidated Statement of Operations. There were no fair value hedges outstanding for the years ended December 31, 2018 or 2017.

FAIR VALUE HEDGE IMPACTS

(Dollars in millions)

		Pretax gain (loss) on derivatives recognized in earnings	
Location		Year ended December 31, 2016	
Sempra Energy Consolidated:			
Interest rate instruments	Interest Expense	\$	3
Interest rate instruments	Other Income, Net		(2)
Total		\$	1

The table below includes the effects of derivative instruments designated as cash flow hedges on the Consolidated Statements of Operations and in OCI and AOCI.

CASH FLOW HEDGE IMPACTS

(Dollars in millions)

	Pretax gain (loss) recognized in OCI			Location	Pretax gain (loss) reclassified from AOCI into earnings		
	Years ended December 31,				Years ended December 31,		
	2018	2017	2016		2018	2017	2016
Sempra Energy Consolidated:							
Interest rate and foreign exchange instruments ⁽¹⁾	\$ 31	\$ 19	\$ (8)	Interest Expense	\$ —	\$ 4	\$ (17)
				Other Income, Net	2	—	—
Interest rate instruments	—	—	—	Gain on Sale of Assets	(9)	—	—
Interest rate and foreign exchange instruments	41	(34)	(4)	Equity Earnings	(7)	(20)	(15)
Interest rate and foreign exchange instruments	—	—	—	Remeasurement of Equity Method Investment	—	—	(7)
Foreign exchange instruments	(4)	4	4	Revenues: Energy- Related Businesses	1	2	—
Commodity contracts not subject to rate recovery	—	3	(13)	Revenues: Energy- Related Businesses	—	(9)	6
Total	\$ 68	\$ (8)	\$ (21)		\$ (13)	\$ (23)	\$ (33)
SDG&E:							
Interest rate instruments ⁽¹⁾	\$ 1	\$ (2)	\$ (2)	Interest Expense	\$ (7)	\$ (13)	\$ (12)
SoCalGas:							
Interest rate instruments	\$ —	\$ —	\$ —	Interest Expense	\$ (1)	\$ —	\$ (1)

⁽¹⁾ Amounts include Otay Mesa VIE. All of SDG&E's interest rate derivative activity relates to Otay Mesa VIE.

For Sempra Energy Consolidated, we expect that net gains of \$22 million, which are net of income tax expense, that are currently recorded in AOCI (including \$2 million of losses in NCI related to Otay Mesa VIE at SDG&E) related to cash flow hedges will be reclassified into earnings during the next 12 months as the hedged items affect earnings. SoCalGas expects that \$1 million of losses, net of income tax benefit, that are currently recorded in AOCI related to cash flow hedges will be reclassified into earnings during the next 12 months as the hedged items affect earnings. Actual amounts ultimately reclassified into earnings depend on the interest rates in effect when derivative contracts mature.

For all forecasted transactions, the maximum remaining term over which we are hedging exposure to the variability of cash flows at December 31, 2018 is approximately 13 years and less than 1 year for Sempra Energy Consolidated and SDG&E, respectively. The maximum remaining term for which we are hedging exposure to the variability of cash flows at our equity method investees is 15 years.

The following table summarizes the effects of derivative instruments not designated as hedging instruments on the Consolidated Statements of Operations.

UNDESIGNATED DERIVATIVE IMPACTS

(Dollars in millions)

	Location	Pretax gain (loss) on derivatives recognized in earnings		
		Years ended December 31,		
		2018	2017	2016
Sempra Energy Consolidated:				
Foreign exchange instruments	Other Income, Net	\$ 3	\$ 49	\$ (32)
Foreign exchange instruments	Equity Earnings	—	1	3
Commodity contracts not subject to rate recovery	Revenues: Energy-Related Businesses	26	16	(18)
Commodity contracts not subject to rate recovery	Operation and Maintenance	—	—	1
Commodity contracts subject to rate recovery	Cost of Electric Fuel and Purchased Power	279	54	(53)
Commodity contracts subject to rate recovery	Cost of Natural Gas	5	(2)	(4)
Total		\$ 313	\$ 118	\$ (103)
SDG&E:				
Commodity contracts subject to rate recovery	Cost of Electric Fuel and Purchased Power	\$ 279	\$ 54	\$ (53)
SoCalGas:				
Commodity contracts not subject to rate recovery	Operation and Maintenance	\$ —	\$ —	\$ 1
Commodity contracts subject to rate recovery	Cost of Natural Gas	5	(2)	(4)
Total		\$ 5	\$ (2)	\$ (3)

CONTINGENT FEATURES

For Sempra Energy Consolidated, SDG&E and SoCalGas, certain of our derivative instruments contain credit limits which vary depending on our credit ratings. Generally, these provisions, if applicable, may reduce our credit limit if a specified credit rating agency reduces our ratings. In certain cases, if our credit ratings were to fall below investment grade, the counterparty to these derivative liability instruments could request immediate payment or demand immediate and ongoing full collateralization.

For Sempra Energy Consolidated, the total fair value of this group of derivative instruments in a net liability position at December 31, 2018 and 2017 was \$16 million and \$6 million, respectively. At December 31, 2018, if the credit ratings of Sempra Energy were reduced below investment grade, \$20 million of additional assets could be required to be posted as collateral for these derivative contracts. For SDG&E, the total fair value of this group of derivative instruments in a net liability position at December 31, 2017 was \$1 million. For SoCalGas, the total fair value of this group of derivative instruments in a net liability position at December 31, 2018 was \$5 million. At December 31, 2018, if the credit ratings of SoCalGas were reduced below investment grade, \$5 million of additional assets could be required to be posted as collateral for these derivative contracts.

For Sempra Energy Consolidated, SDG&E and SoCalGas, some of our derivative contracts contain a provision that would permit the counterparty, in certain circumstances, to request adequate assurance of our performance under the contracts. Such additional assurance, if needed, is not material and is not included in the amounts above.

NOTE 12. FAIR VALUE MEASUREMENTS

RECURRING FAIR VALUE MEASURES

The three tables below, by level within the fair value hierarchy, set forth our financial assets and liabilities that were accounted for at fair value on a recurring basis at December 31, 2018 and 2017. We classify financial assets and liabilities in their entirety based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of fair value assets and liabilities, and their placement within the fair value hierarchy.

The fair value of commodity derivative assets and liabilities is presented in accordance with our netting policy, as we discuss in Note 11 in “Financial Statement Presentation.”

The determination of fair values, shown in the tables below, incorporates various factors, including but not limited to, the credit standing of the counterparties involved and the impact of credit enhancements (such as cash deposits, letters of credit and priority interests).

Our financial assets and liabilities that were accounted for at fair value on a recurring basis in the tables below include the following (other than a \$10 million investment at December 31, 2018 measured at NAV):

- Nuclear decommissioning trusts reflect the assets of SDG&E’s NDT, excluding cash balances. A third party trustee values the trust assets using prices from a pricing service based on a market approach. We validate these prices by comparison to prices from other independent data sources. Securities are valued using quoted prices listed on nationally recognized securities exchanges or based on closing prices reported in the active market in which the identical security is traded (Level 1). Other securities are valued based on yields that are currently available for comparable securities of issuers with similar credit ratings (Level 2).
- For commodity contracts, interest rate derivatives and foreign exchange instruments, we primarily use a market approach with market participant assumptions to value these derivatives. Market participant assumptions include those about risk, and the risk inherent in the inputs to the valuation techniques. These inputs can be readily observable, market corroborated, or generally unobservable. We have exchange-traded derivatives that are valued based on quoted prices in active markets for the identical instruments (Level 1). We also may have other commodity derivatives that are valued using industry standard models that consider quoted forward prices for commodities, time value, current market and contractual prices for the underlying instruments, volatility factors, and other relevant economic measures (Level 2). Level 3 recurring items relate to CRRs and long-term, fixed-price electricity positions at SDG&E, as we discuss below in “Level 3 Information.”
- Rabbi Trust investments include marketable securities that we value using a market approach based on closing prices reported in the active market in which the identical security is traded (Level 1). These investments in marketable securities were negligible at both December 31, 2018 and 2017.

RECURRING FAIR VALUE MEASURES – SEMPRA ENERGY CONSOLIDATED
(Dollars in millions)

	Fair value at December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets:				
Nuclear decommissioning trusts:				
Equity securities	\$ 407	\$ 4	\$ —	\$ 411
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies	43	10	—	53
Municipal bonds	—	269	—	269
Other securities	—	234	—	234
Total debt securities	43	513	—	556
Total nuclear decommissioning trusts ⁽¹⁾	450	517	—	967
Interest rate and foreign exchange instruments	—	2	—	2
Commodity contracts not subject to rate recovery	—	24	—	24
Effect of netting and allocation of collateral ⁽²⁾	19	—	—	19
Commodity contracts subject to rate recovery	2	9	278	289
Effect of netting and allocation of collateral ⁽²⁾	28	—	5	33
Total	\$ 499	\$ 552	\$ 283	\$ 1,334
Liabilities:				
Interest rate and foreign exchange instruments	\$ —	\$ 150	\$ —	\$ 150
Commodity contracts not subject to rate recovery	—	34	—	34
Commodity contracts subject to rate recovery	2	5	99	106
Effect of netting and allocation of collateral ⁽²⁾	(2)	—	—	(2)
Total	\$ —	\$ 189	\$ 99	\$ 288

	Fair value at December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets:				
Nuclear decommissioning trusts:				
Equity securities	\$ 491	\$ 5	\$ —	\$ 496
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies	45	9	—	54
Municipal bonds	—	250	—	250
Other securities	—	217	—	217
Total debt securities	45	476	—	521
Total nuclear decommissioning trusts ⁽¹⁾	536	481	—	1,017
Interest rate and foreign exchange instruments	—	7	—	7
Commodity contracts not subject to rate recovery	5	12	—	17
Effect of netting and allocation of collateral ⁽²⁾	2	—	—	2
Commodity contracts subject to rate recovery	—	2	126	128
Effect of netting and allocation of collateral ⁽²⁾	12	—	5	17
Total	\$ 555	\$ 502	\$ 131	\$ 1,188
Liabilities:				
Interest rate and foreign exchange instruments	\$ —	\$ 217	\$ —	\$ 217
Commodity contracts not subject to rate recovery	—	6	—	6
Commodity contracts subject to rate recovery	23	7	154	184
Effect of netting and allocation of collateral ⁽²⁾	(23)	—	—	(23)
Total	\$ —	\$ 230	\$ 154	\$ 384

⁽¹⁾ Excludes cash balances and cash equivalents.

⁽²⁾ Includes the effect of the contractual ability to settle contracts under master netting agreements and with cash collateral, as well as cash collateral not offset.

RECURRING FAIR VALUE MEASURES – SDG&E
(Dollars in millions)

Fair value at December 31, 2018

	Level 1	Level 2	Level 3	Total
Assets:				
Nuclear decommissioning trusts:				
Equity securities	\$ 407	\$ 4	\$ —	\$ 411
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies	43	10	—	53
Municipal bonds	—	269	—	269
Other securities	—	234	—	234
Total debt securities	43	513	—	556
Total nuclear decommissioning trusts ⁽¹⁾	450	517	—	967
Commodity contracts subject to rate recovery	1	6	278	285
Effect of netting and allocation of collateral ⁽²⁾	23	—	5	28
Total	\$ 474	\$ 523	\$ 283	\$ 1,280
Liabilities:				
Interest rate instruments	\$ —	\$ 1	\$ —	\$ 1
Commodity contracts subject to rate recovery	2	—	99	101
Effect of netting and allocation of collateral ⁽²⁾	(2)	—	—	(2)
Total	\$ —	\$ 1	\$ 99	\$ 100

Fair value at December 31, 2017

	Level 1	Level 2	Level 3	Total
Assets:				
Nuclear decommissioning trusts:				
Equity securities	\$ 491	\$ 5	\$ —	\$ 496
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies	45	9	—	54
Municipal bonds	—	250	—	250
Other securities	—	217	—	217
Total debt securities	45	476	—	521
Total nuclear decommissioning trusts ⁽¹⁾	536	481	—	1,017
Commodity contracts subject to rate recovery	—	—	126	126
Effect of netting and allocation of collateral ⁽²⁾	11	—	5	16
Total	\$ 547	\$ 481	\$ 131	\$ 1,159
Liabilities:				
Interest rate instruments	\$ —	\$ 13	\$ —	\$ 13
Commodity contracts subject to rate recovery	23	5	154	182
Effect of netting and allocation of collateral ⁽²⁾	(23)	—	—	(23)
Total	\$ —	\$ 18	\$ 154	\$ 172

⁽¹⁾ Excludes cash balances and cash equivalents.

⁽²⁾ Includes the effect of the contractual ability to settle contracts under master netting agreements and with cash collateral, as well as cash collateral not offset.

RECURRING FAIR VALUE MEASURES – SOCIALGAS*(Dollars in millions)*

	Fair value at December 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets:				
Commodity contracts subject to rate recovery	\$ 1	\$ 3	\$ —	\$ 4
Effect of netting and allocation of collateral ⁽¹⁾	5	—	—	5
Total	\$ 6	\$ 3	\$ —	\$ 9
Liabilities:				
Commodity contracts subject to rate recovery	\$ —	\$ 5	\$ —	\$ 5
Total	\$ —	\$ 5	\$ —	\$ 5

	Fair value at December 31, 2017			
	Level 1	Level 2	Level 3	Total
Assets:				
Commodity contracts subject to rate recovery	\$ —	\$ 2	\$ —	\$ 2
Effect of netting and allocation of collateral ⁽¹⁾	1	—	—	1
Total	\$ 1	\$ 2	\$ —	\$ 3
Liabilities:				
Commodity contracts subject to rate recovery	\$ —	\$ 2	\$ —	\$ 2
Total	\$ —	\$ 2	\$ —	\$ 2

⁽¹⁾ Includes the effect of the contractual ability to settle contracts under master netting agreements and with cash collateral, as well as cash collateral not offset.

Level 3 Information

The following table sets forth reconciliations of changes in the fair value of CRRs and long-term, fixed-price electricity positions classified as Level 3 in the fair value hierarchy for Sempra Energy Consolidated and SDG&E:

LEVEL 3 RECONCILIATIONS⁽¹⁾*(Dollars in millions)*

	Years ended December 31,		
	2018	2017	2016
Balance at January 1	\$ (28)	\$ (74)	\$ 19
Realized and unrealized gains (losses)	209	34	(120)
Allocated transmission instruments	10	6	8
Settlements	(12)	6	19
Balance at December 31	\$ 179	\$ (28)	\$ (74)
Change in unrealized gains (losses) relating to instruments still held at December 31	\$ 183	\$ 30	\$ (101)

⁽¹⁾ Excludes the effect of the contractual ability to settle contracts under master netting agreements.

Inputs used to determine the fair value of CRRs and fixed-price electricity positions are reviewed and compared with market conditions to determine reasonableness. SDG&E expects all costs related to these instruments to be recoverable through customer rates. As such, there is no impact to earnings from changes in the fair value of these instruments.

CRRs are recorded at fair value based almost entirely on the most current auction prices published by the California ISO, an objective source. Annual auction prices are published once a year, typically in the middle of November, and are the basis for valuing CRRs settling in the following year. For the CRRs settling from January 1 to December 31, the auction price inputs, at a given location, were in the following ranges for the years indicated below:

CONGESTION REVENUE RIGHTS AUCTION PRICE INPUTS

Settlement year	Price per MWh				Median price per MWh
2019	\$	(8.57)	to	\$ 35.21	\$ (2.94)
2018		(7.25)	to	11.99	0.09
2017		(11.88)	to	6.93	(0.14)

The impact associated with discounting is negligible. Because these auction prices are a less observable input, these instruments are classified as Level 3. The fair value of these instruments is derived from auction price differences between two locations. Positive values between two locations represent expected future reductions in congestion costs, whereas negative values between two locations represent expected future charges. Valuation of our CRRs is sensitive to a change in auction price. If auction prices at one location increase (decrease) relative to another location, this could result in a higher (lower) fair value measurement. We summarize CRR volumes in Note 11.

Long-term, fixed-price electricity positions that are valued using significant unobservable data are classified as Level 3 because the contract terms relate to a delivery location or tenor for which observable market rate information is not available. The fair value of the net electricity positions classified as Level 3 is derived from a discounted cash flow model using market electricity forward price inputs. The range and weighted-average price of these inputs was as follows:

LONG-TERM, FIXED-PRICE ELECTRICITY POSITIONS PRICE INPUTS

Settlement year	Price per MWh				Weighted-average price per MWh
2018	\$	22.20	to	\$ 76.85	\$ 42.69
2017		22.55	to	44.10	35.23

A significant increase or decrease in market electricity forward prices would result in a significantly higher or lower fair value, respectively. We summarize long-term, fixed-price electricity position volumes in Note 11.

Realized gains and losses associated with CRRs and long-term electricity positions, which are recoverable in rates, are recorded in Cost of Electric Fuel and Purchased Power on the Consolidated Statements of Operations. Unrealized gains and losses are recorded as regulatory assets and liabilities, and therefore do not affect earnings.

Fair Value of Financial Instruments

The fair values of certain of our financial instruments (cash, accounts and notes receivable, short-term amounts due to/from unconsolidated affiliates, dividends and accounts payable, short-term debt and customer deposits) approximate their carrying amounts because of the short-term nature of these instruments. Investments in life insurance contracts that we hold in support of our Supplemental Executive Retirement, Cash Balance Restoration and Deferred Compensation Plans are carried at cash surrender values, which represent the amount of cash that could be realized under the contracts. The following table provides the carrying amounts and fair values of certain other financial instruments that are not recorded at fair value on the Consolidated Balance Sheets at December 31, 2018 and 2017:

FAIR VALUE OF FINANCIAL INSTRUMENTS*(Dollars in millions)*

	December 31, 2018				
	Carrying amount	Fair value			Total
		Level 1	Level 2	Level 3	
Sempra Energy Consolidated:					
Long-term amounts due from unconsolidated affiliates	\$ 688	\$ —	\$ 648	\$ 47	\$ 695
Long-term amounts due to unconsolidated affiliates	37	—	35	—	35
Total long-term debt ⁽¹⁾⁽²⁾	22,067	—	21,274	351	21,625
SDG&E:					
Total long-term debt ⁽²⁾⁽³⁾	\$ 4,996	\$ —	\$ 4,897	\$ 220	\$ 5,117
SoCalGas:					
Total long-term debt ⁽⁴⁾	\$ 3,459	\$ —	\$ 3,505	\$ —	\$ 3,505
	December 31, 2017				
	Carrying amount	Fair value			Total
		Level 1	Level 2	Level 3	
Sempra Energy Consolidated:					
Long-term amounts due from unconsolidated affiliates	\$ 598	\$ —	\$ 510	\$ 108	\$ 618
Long-term amounts due to unconsolidated affiliates	35	—	32	—	32
Total long-term debt ⁽¹⁾⁽²⁾	17,138	817	17,134	458	18,409
SDG&E:					
Total long-term debt ⁽²⁾⁽³⁾	\$ 4,868	\$ —	\$ 5,073	\$ 295	\$ 5,368
SoCalGas:					
Total long-term debt ⁽⁴⁾	\$ 3,009	\$ —	\$ 3,192	\$ —	\$ 3,192

⁽¹⁾ Before reductions for unamortized discount (net of premium) and debt issuance costs of \$202 million and \$143 million at December 31, 2018 and 2017, respectively, and excluding build-to-suit and capital lease obligations of \$1,419 million and \$877 million at December 31, 2018 and 2017, respectively. We discuss our long-term debt in Note 7.

⁽²⁾ Level 3 instruments include \$220 million and \$295 million at December 31, 2018 and 2017, respectively, related to Otay Mesa VIE.

⁽³⁾ Before reductions for unamortized discount and debt issuance costs of \$49 million and \$45 million at December 31, 2018 and 2017, respectively, and excluding capital lease obligations of \$1,272 million and \$732 million at December 31, 2018 and 2017, respectively.

⁽⁴⁾ Before reductions for unamortized discount and debt issuance costs of \$32 million and \$24 million at December 31, 2018 and 2017, respectively, and excluding capital lease obligations of \$3 million and \$1 million at December 31, 2018 and 2017, respectively.

We provide the fair values for the securities held in the NDT funds related to SONGS in Note 15.

NON-RECURRING FAIR VALUE MEASURES***Sempra Mexico******TdM***

In February 2016, management approved a plan to market and sell Sempra Mexico's TdM natural gas-fired power plant, and classified it as held for sale on the Sempra Energy Consolidated Balance Sheet. In September 2016, we received market information that indicated that the fair value of TdM may be less than its carrying value. As a result, after performing an analysis of the information, Sempra Mexico reduced the carrying value of TdM by recognizing a noncash impairment charge of \$131 million (\$111 million after tax) in the third quarter of 2016. In 2017, Sempra Mexico received a purchase price offer resulting from negotiations with an active market participant. This new market information indicated that the fair value of TdM was lower than its carrying value at June 30, 2017. As a result, in the second quarter of 2017, Sempra Mexico further reduced the carrying value of TdM by recognizing a noncash impairment charge of \$71 million. Impairments recorded for TdM are included in Impairment Losses on Sempra Energy's Consolidated Statements of Operations. Market values resulting from a third-party bidding process and a purchase price offer are considered to be Level 2 inputs in the fair value hierarchy, as they represent observable pricing inputs. TdM was reclassified to held and used in June 2018 when management terminated the sales process.

ENova Pipelines

In September 2016, IENova completed the acquisition of PEMEX's 50-percent interest in IENova Pipelines, increasing its ownership interest to 100 percent. As a result of IENova obtaining control over IENova Pipelines, in the year ended December 31, 2016, Sempra Mexico recognized a pretax gain of \$617 million (\$432 million after tax) for the excess of the acquisition-date fair

value of its previously held equity interest in IEnova Pipelines (\$1.144 billion) over the carrying value of that interest (\$520 million) and losses reclassified from AOCI (\$7 million), included as Remeasurement of Equity Method Investment on Sempra Energy's Consolidated Statement of Operations. The valuation technique used to measure the acquisition-date fair value of our equity interest in IEnova Pipelines immediately prior to the business acquisition was based on the fair value of the entire business combination (\$2.288 billion) less the fair value of the consideration paid (\$1.144 billion, the equity sale price). We discuss the IEnova Pipelines acquisition in Note 5.

Sempra Renewables

U.S. Wind Investments

As we discuss in Notes 5 and 6, on June 25, 2018, our board of directors approved a plan to sell all our wind and solar equity method investments at Sempra Renewables. Because of our expectation of a shorter holding period as a result of this plan of sale, we evaluated the recoverability of the carrying amounts of each of these investments and concluded there is an other-than-temporary impairment on certain of our wind equity method investments totaling \$200 million (\$145 million after tax), which we recorded in Equity Earnings on Sempra Energy's Consolidated Statement of Operations for the year ended December 31, 2018. We measured the estimated fair value of \$145 million at June 25, 2018 using a discounted cash flow model including significant unobservable inputs, adjusted for our applicable ownership percentages, which is a Level 3 measurement in the fair value hierarchy. The key inputs to the methodology were contracted and merchant pricing, and the discount rate.

Sempra LNG & Midstream

Non-Utility Natural Gas Storage Assets

As we discuss in Note 5, on June 25, 2018, our board of directors approved a plan to sell Mississippi Hub, our 90.9-percent ownership interest in Bay Gas and other non-utility assets (the non-utility natural gas storage assets). We also own a 75.4-percent interest in LA Storage, a salt cavern development project in Cameron Parish, Louisiana. The LA Storage project also includes an existing 23.3-mile pipeline header system that is not currently contracted.

Because of the plan of sale, we considered a market participant's view of the total value of the non-utility natural gas storage assets and determined that their fair value, less costs to sell, may be less than their carrying value. Additionally, our inability to secure customer contracts that would support further investment in LA Storage led us to assess and conclude that the full carrying value of these other U.S. midstream assets may not be recoverable. As a result, on June 25, 2018, we recorded an impairment of \$1.3 billion (\$755 million after tax and NCI) in Impairment Losses on Sempra Energy's Consolidated Statement of Operations.

We measured the estimated fair value of \$190 million at June 25, 2018 using a discounted cash flow approach. This approach included unobservable inputs, resulting in a Level 3 measurement in the fair value hierarchy. We considered a market participant's view of the values of the non-utility natural gas storage assets based on an estimation of future net cash flows. To estimate future net cash flows, we considered the non-utility natural gas storage assets' prospects for generating revenues and cash flows beyond their existing contracted capacity and tenors, including natural gas price volatility and seasonality factors, as well as discount rates commensurate with the risks inherent in the cash flows.

On January 1, 2019, Sempra LNG & Midstream entered into an agreement to sell Mississippi Hub and Bay Gas to an affiliate of ArcLight Capital Partners for \$332 million, subject to working capital adjustments and \$20 million representing Sempra LNG & Midstream's purchase of the 9.1-percent minority interest in Bay Gas immediately prior to and included as part of the sale. On February 7, 2019, Sempra LNG & Midstream completed this sale. Additionally, in December 2018, Sempra LNG & Midstream entered into an agreement to sell other non-utility assets for \$5 million; such sale was completed in January 2019. We considered the assets' sales prices negotiated with active market participants to be a relevant and material data input. Accordingly, we updated our fair value analysis to reflect the Level 2 market participant input as the primary indicator of fair value. As a result, on December 31, 2018, we reduced the impairment of \$1.3 billion recorded on June 25, 2018 by \$183 million (\$126 million after tax and NCI), resulting in a total impairment of \$1.1 billion (\$629 million after tax and NCI) for the year ended December 31, 2018, based on a fair value of \$337 million for these non-utility natural gas storage assets.

Rockies Express

In March 2016, Sempra LNG & Midstream agreed to sell its 25-percent interest in Rockies Express for cash consideration of \$440 million, subject to adjustment at closing. In March 2016, we recorded a noncash impairment of our investment in Rockies Express of \$44 million (\$27 million after tax). The charge is included in Equity Earnings on the Sempra Energy Consolidated Statement of Operations for the year ended December 31, 2016. We considered the sale price for our equity interest in Rockies

Express to be a market participants' view of the total value of Rockies Express and measured the fair value of our investment based on the equity sale price. The sale was completed in May 2016.

The table below summarizes significant inputs impacting our non-recurring fair value measures. Additional discussions about the related transactions are provided in Note 5, and as applicable, in Note 6.

NON-RECURRING FAIR VALUE MEASURES – SEMPRA ENERGY CONSOLIDATED

	Measurement date	Estimated fair value (in millions)	Valuation technique	Fair value hierarchy	% of fair value measurement	Inputs used to develop measurement	Range of inputs (weighted average)
Non-utility natural gas storage assets	December 31, 2018	\$ 337 ⁽¹⁾	Market approach	Level 2	100%	Assets' sales prices	100%
Non-utility natural gas storage assets	June 25, 2018	\$ 190 ⁽¹⁾⁽²⁾	Discounted cash flows	Level 3	100%	Storage rates per Dth/month Discount rate	\$0.06 - \$0.22 (\$0.10) ⁽³⁾ 10% ⁽⁴⁾
Certain of our U.S. wind equity method investments	June 25, 2018	\$ 145 ⁽⁵⁾	Discounted cash flows	Level 3	100%	Contracted and observable merchant prices per MWh Discount rate	\$29 - \$92 ⁽³⁾ 8% - 10% (8.7%) ⁽⁴⁾
TdM	June 30, 2017	\$ 62	Market approach	Level 2	100%	Purchase price offer	100%
TdM	September 29, 2016	\$ 145	Market approach	Level 2	100%	Purchase price offers	100%
Investment in IEnova Pipelines	September 26, 2016	\$ 1,144 ⁽⁶⁾	Market approach	Level 2	100%	Equity sale price	100%
Investment in Rockies Express	March 29, 2016	\$ 440	Market approach	Level 2	100%	Equity sale price	100%

⁽¹⁾ Includes Mississippi Hub, Bay Gas and other non-utility assets, which are classified as held for sale at December 31, 2018 with a net carrying value of \$323 million, reflecting estimated costs to sell.

⁽²⁾ Includes LA Storage, which continues to be classified as PP&E.

⁽³⁾ Generally, significant increases (decreases) in this input in isolation would result in a significantly higher (lower) fair value measurement.

⁽⁴⁾ An increase in the discount rate would result in a decrease in fair value.

⁽⁵⁾ At December 31, 2018, these U.S. wind equity method investments had a carrying value of \$139 million, reflecting subsequent business activity.

⁽⁶⁾ Immediately prior to acquiring a 100-percent ownership interest in IEnova Pipelines.

NOTE 13. PREFERRED STOCK

Sempra Energy and SDG&E are authorized to issue up to 50 million and 45 million shares of preferred stock, respectively. At December 31, 2018 and 2017, SDG&E had no preferred stock outstanding. The rights, preferences, privileges and restrictions for any new series of preferred stock would be established by each company's board of directors at the time of issuance.

SEMPRA ENERGY MANDATORY CONVERTIBLE PREFERRED STOCK

On January 9, 2018, we issued 17,250,000 shares of our 6% mandatory convertible preferred stock, series A (series A preferred stock) in a registered public offering at \$100.00 per share (or \$98.20 per share after deducting underwriting discounts), including 2,250,000 shares purchased by the underwriters from us as a result of fully exercising their option to purchase such shares from us solely to cover overallocments. Each share of series A preferred stock has a liquidation value of \$100.00. We used the net proceeds of approximately \$1.69 billion (net of underwriting discounts and equity issuance costs of \$32 million) to fund a portion of the Merger Consideration, as we discuss in Note 5.

On July 13, 2018, we issued 5,750,000 shares of our 6.75% mandatory convertible preferred stock, series B (series B preferred stock) in a registered public offering at \$100.00 per share (or \$98.35 per share after deducting underwriting discounts), including 750,000 shares purchased by the underwriters from us as a result of fully exercising their option to purchase such shares from us solely to cover overallocments. Each share of series B preferred stock has a liquidation value of \$100.00. We used the net proceeds of approximately \$565 million (net of underwriting discounts and equity issuance costs of \$10 million) to repay commercial paper, to fund working capital and for other general corporate purposes.

Mandatory Conversion

Unless earlier converted, each share of the series A preferred stock and series B preferred stock will automatically convert on the mandatory conversion date of January 15, 2021 and July 15, 2021, respectively. The number of shares of our common stock issuable on conversion of each series of preferred stock will be determined based on the volume-weighted average market value per share of our common stock over the 20-consecutive trading day period beginning on and including the 21st scheduled trading day immediately preceding January 15, 2021 for the series A preferred stock and July 15, 2021 for the series B preferred stock. The following table illustrates the conversion rate per share of each series of preferred stock, subject to certain anti-dilution adjustments.

CONVERSION RATES	
Applicable market value per share of our common stock	Conversion rate (number of shares of our common stock to be received upon conversion of each share of mandatory convertible preferred stock)
Series A preferred stock	
Greater than \$131.075 (which is the threshold appreciation price)	0.7629 shares (approximately equal to \$100.00 divided by the threshold appreciation price)
Equal to or less than \$131.075 but greater than or equal to \$107.00	Between 0.7629 and 0.9345 shares, determined by dividing \$100.00 by the applicable market value of our common stock
Less than \$107.00 (which is the initial price)	0.9345 shares (approximately equal to \$100.00 divided by the initial price)
Series B preferred stock	
Greater than \$136.50 (which is the threshold appreciation price)	0.7326 shares (approximately equal to \$100.00 divided by the threshold appreciation price)
Equal to or less than \$136.50 but greater than or equal to \$113.75	Between 0.7326 and 0.8791 shares, determined by dividing \$100.00 by the applicable market value of our common stock
Less than \$113.75 (which is the initial price)	0.8791 shares (approximately equal to \$100.00 divided by the initial price)

Conversion at the Option of the Holder

Generally, and subject to the terms of the respective series of preferred stock, at any time prior to January 15, 2021 for the series A preferred stock and July 15, 2021 for the series B preferred stock, holders may elect to convert each share of their preferred stock into shares of our common stock at the minimum conversion rate, which could result in an aggregate of approximately 13.2 million common shares with respect to conversion of series A preferred stock and 4.2 million common shares with respect to conversion of series B preferred stock, if all outstanding preferred stock under each series were converted early, subject to anti-dilution adjustments. Further, if holders elect to convert any shares of either series of preferred stock during a specified period beginning on the effective date of a fundamental change, as defined in the certificate of determination of preferences of the respective series of preferred stock, such shares of preferred stock will be converted into shares of our common stock at a fundamental change conversion rate, and the holders will also be entitled to receive a fundamental change dividend make-whole amount and accumulated dividend amount.

Dividends

Dividends on each series of preferred stock are payable quarterly on a cumulative basis when, as and if declared by our board of directors. The first quarterly dividend for the series A preferred stock and series B preferred stock was paid on April 15, 2018 and October 15, 2018, respectively. We may pay quarterly declared dividends in cash or, subject to certain limitations, in shares of our common stock, no par value, or in any combination of cash and shares of our common stock. Shares of common stock used to pay dividends will be valued at 97 percent of the volume-weighted average price per share over the five-consecutive trading day period beginning on, and including the sixth trading day prior to, the applicable dividend payment date. The holders of each series of preferred stock do not have voting rights with respect to their preferred stock. However, under certain circumstances including nonpayment of dividends for six or more dividend periods, whether or not consecutive, the authorized number of directors on our board of directors will automatically be increased by two and the holders of each series of preferred stock, voting together as a

single class with holders of any and all other outstanding preferred stock of equal rank having similar voting rights, will be entitled to elect two directors to fill such newly created directorships. This right shall terminate when all accumulated dividends have been paid in full and the authorized number of directors shall automatically decrease by two, subject to the revesting of that right in the event of each subsequent nonpayment.

Ranking

Each series of preferred stock will rank with respect to dividend rights and distribution rights upon our liquidation, winding-up or dissolution:

- senior to our common stock, including our capital stock established in the future, unless the terms of such capital stock expressly provide otherwise;
- on parity with each series of preferred stock, including our capital stock established in the future, unless the terms of such capital stock expressly provide otherwise;
- junior to our capital stock established in the future, if the terms provide that such class of series of new capital stock will rank senior to the series A preferred stock and series B preferred stock;
- junior to our existing and future indebtedness and other liabilities; and
- structurally subordinated to any existing and future indebtedness and other liabilities of our subsidiaries and capital stock of our subsidiaries held by third parties.

SOCALGAS PREFERRED STOCK

SoCalGas is authorized to issue up to an aggregate of 11 million shares of preferred stock, series preferred stock and preference stock. The table below presents preferred stock outstanding at SoCalGas:

PREFERRED STOCK OUTSTANDING <i>(Dollars in millions, except per share amounts)</i>	December 31,	
	2018	2017
\$25 par value, authorized 1,000,000 shares:		
6% Series, 79,011 shares outstanding	\$ 3	\$ 3
6% Series A, 783,032 shares outstanding	19	19
SoCalGas - Total preferred stock	22	22
Less: 50,970 shares of the 6% Series outstanding owned by Pacific Enterprises	(2)	(2)
Sempra Energy - Total preferred stock of subsidiary	\$ 20	\$ 20

None of SoCalGas' outstanding preferred stock is callable, and no shares are subject to mandatory redemption.

All outstanding shares have one vote per share, cumulative preferences as to dividends and liquidation preferences of \$25 per share plus any unpaid dividends.

In addition to the outstanding preferred stock above, SoCalGas' articles of incorporation authorize 5 million shares of series preferred stock and 5 million shares of preference stock, both without par value and with cumulative preferences as to dividends and liquidation value. The preference stock would rank junior to all series of preferred stock and series preferred stock. Other rights and privileges of any new series of such stock would be established by the SoCalGas board of directors at the time of issuance.

NOTE 14. SEMPRA ENERGY – SHAREHOLDERS' EQUITY AND EARNINGS PER COMMON SHARE

SEMPRA ENERGY COMMON STOCK OFFERINGS

On January 9, 2018, we completed the offering of 23,364,486 shares of our common stock, no par value, in a registered public offering at \$107.00 per share (approximately \$105.07 per share after deducting underwriting discounts), pursuant to forward sale agreements with each of Morgan Stanley & Co. LLC, an affiliate of RBC Capital Markets, LLC and an affiliate of Barclays Capital Inc. (the January 2018 forward purchasers). The shares offered pursuant to the forward sale agreements were borrowed by the underwriters and therefore are not newly issued shares. The underwriters of the offering fully exercised the option we granted them to purchase an additional 3,504,672 shares of common stock directly from us solely to cover overallocments. After the offering, including the issuance of shares pursuant to the exercise of the overallocment option, the aggregate shares of common stock sold in the offering totaled 26,869,158. We received net proceeds of \$367 million (net of underwriting discounts and equity issuance costs of \$8 million) from the sale of shares to cover overallocments. We did not initially receive any proceeds from the sale of our common stock sold pursuant to the forward sale agreements.

In the first quarter of 2018, we settled approximately \$900 million (net of underwriting discounts of \$16 million) and in the second quarter of 2018, we settled approximately \$800 million (net of underwriting discounts of \$14 million) of forward sales under the forward sale agreements by delivering 8,556,630 shares and 7,651,671 shares, respectively, of newly issued Sempra Energy common stock at forward sale prices ranging from approximately \$104.53 to approximately \$105.18 per share.

We used the net proceeds from the sale of shares in the January 2018 offering and from the settlement of forward sales in the first quarter of 2018 under the forward sale agreements to fund a portion of the Merger Consideration, as we discuss in Note 5. We used the net proceeds from the settlement of forward sales in the second quarter of 2018 to repay long-term debt maturing in June 2018 and to repay commercial paper used to fund a portion of the Merger Consideration.

On July 13, 2018, we completed the offering of 9,750,000 shares of our common stock, no par value, in a registered public offering at \$113.75 per share (approximately \$111.87 per share after deducting underwriting discounts), pursuant to forward sale agreements with an affiliate of Citigroup Global Markets Inc. and an affiliate of J.P. Morgan Securities LLC (the July 2018 forward purchasers, together with the January 2018 forward purchasers, the forward purchasers). The shares offered pursuant to the forward sale agreements were borrowed by the underwriters and therefore are not newly issued shares. The underwriters of the offering fully exercised the option we granted them to purchase an additional 1,462,500 shares of common stock directly from us solely to cover overallocments. After the offering, including the issuance of shares pursuant to the exercise of the overallocment option, the aggregate shares of common stock sold in the offering totaled 11,212,500. We received net proceeds of \$164 million (net of underwriting discounts and equity issuance costs of \$3 million) from the sale of shares to cover overallocments. We did not initially receive any proceeds from the sale of our common stock sold pursuant to the forward sale agreements. We used the net proceeds from the sale of the overallocment shares to the underwriters, and we expect to use the net proceeds from the sale of shares of our common stock pursuant to the forward sale agreements, to repay commercial paper, to fund working capital and for other general corporate purposes.

As of February 26, 2019, a total of 16,906,185 shares of Sempra Energy common stock from our January 2018 and July 2018 offerings remain subject to future settlement under these forward sale agreements, which may be settled on one or more dates specified by us occurring no later than December 15, 2019, which is the final settlement date under the agreements. Although we expect to settle the forward sale agreements entirely by the physical delivery of shares of our common stock in exchange for cash proceeds, we may, subject to certain conditions, elect cash settlement or net share settlement for all or a portion of our obligations under the forward sale agreements. The forward sale agreements are also subject to acceleration by the forward purchasers upon the occurrence of certain events.

EARNINGS PER COMMON SHARE

Basic EPS is calculated by dividing earnings attributable to common shares by the weighted-average common shares outstanding for the year. Diluted EPS includes the potential dilution of common stock equivalent shares that could occur if securities or other contracts to issue common stock were exercised or converted into common stock.

EARNINGS PER COMMON SHARE COMPUTATIONS

(Dollars in millions, except per share amounts; shares in thousands)

	Years ended December 31,		
	2018	2017	2016
Numerator:			
Earnings attributable to common shares	\$ 924	\$ 256	\$ 1,370
Denominator:			
Weighted-average common shares outstanding for basic EPS ⁽¹⁾	268,072	251,545	250,217
Dilutive effect of stock options, RSAs and RSUs ⁽²⁾	919	755	938
Dilutive effect of common shares sold forward	861	—	—
Weighted-average common shares outstanding for diluted EPS	269,852	252,300	251,155
EPS:			
Basic	\$ 3.45	\$ 1.02	\$ 5.48
Diluted	\$ 3.42	\$ 1.01	\$ 5.46

⁽¹⁾ Includes average fully vested RSUs held in our Deferred Compensation Plan of 641 in 2018, 609 in 2017 and 568 in 2016. These fully vested RSUs are included in weighted-average common shares outstanding for basic EPS because there are no conditions under which the corresponding shares will not be issued.

⁽²⁾ Due to market fluctuations of both Sempra Energy common stock and the comparative indices used to determine the vesting percentage of our total shareholder return performance-based RSUs, which we discuss in Note 10, dilutive RSUs may vary widely from period-to-period.

The potentially dilutive impact from stock options, RSAs and RSUs is calculated under the treasury stock method. Under this method, proceeds based on the exercise price and unearned compensation are assumed to be used to repurchase shares on the open market at the average market price for the period, reducing the number of potential new shares to be issued and sometimes causing an antidilutive effect. The computation of diluted EPS excludes potentially dilutive shares of 20,814 for 2018, 237,741 for 2017 and zero for 2016 because to include them would be antidilutive for the period. However, these shares could potentially dilute basic EPS in the future.

The potentially dilutive impact from the forward sale of our common stock pursuant to the forward sale agreements that we discuss above is reflected in our diluted EPS calculation using the treasury stock method. We anticipate there will be a dilutive effect on our EPS when the average market price of our common stock shares is above the applicable adjusted forward sale price, subject to increase or decrease based on the overnight bank funding rate, less a spread, and subject to decrease by amounts related to expected dividends on shares of our common stock during the term of the forward sale agreements. Additionally, if we decide to physically settle or net share settle the forward sale agreements, delivery of our shares to the forward purchasers on any such physical settlement or net share settlement of the forward sale agreements would result in dilution to our EPS.

The potentially dilutive impact from mandatory convertible preferred stock that we issued in 2018 is calculated under the if-converted method. The computation of diluted EPS for the year ended December 31, 2018 excludes 17,197,035 potentially dilutive shares, because to include them would be antidilutive for the period. However, these shares could potentially dilute basic EPS in the future. We discuss the 2018 issuances of our mandatory convertible preferred stock in Note 13.

We are authorized to issue 750 million shares of no par value common stock. The following table provides common stock activity for the last three years.

	Years ended December 31,		
	2018	2017	2016
Common shares outstanding, January 1	251,358,977	250,152,514	248,298,080
Shares issued under forward sale agreements	21,175,473	—	—
RSUs vesting ⁽¹⁾	509,042	362,022	1,363,555
Stock options exercised	138,861	164,454	167,742
Savings plan issuance	553,036	567,428	653,607
Common stock investment plan ⁽²⁾	231,242	254,047	266,056
Issuance of RSUs held in our Deferred Compensation Plan	3,357	7,811	—
Shares repurchased ⁽³⁾	(200,475)	(149,299)	(596,526)
Common shares outstanding, December 31	273,769,513	251,358,977	250,152,514

⁽¹⁾ Includes dividend equivalents.

⁽²⁾ Participants in the Direct Stock Purchase Plan may reinvest dividends to purchase newly issued shares.

⁽³⁾ Generally, we purchase shares of our common stock or units from long-term incentive plan participants who elect to sell to us a sufficient number of vested RSAs or RSUs to meet minimum statutory tax withholding requirements.

NOTE 15. SAN ONOFRE NUCLEAR GENERATING STATION

SDG&E has a 20-percent ownership interest in SONGS, a nuclear generating facility near San Clemente, California, which ceased operations in June 2013. On June 6, 2013, after an extended outage beginning in 2012, as a result of issues with the steam generators used in the facility, Edison, the majority owner and operator of SONGS, notified SDG&E that it had reached a decision to permanently retire SONGS and seek approval from the NRC to start the decommissioning activities for the entire facility. SONGS is subject to the jurisdiction of the NRC and the CPUC.

SDG&E, and each of the other owners, holds its undivided interest as a tenant in common in the property. Each owner is responsible for financing its share of costs. SDG&E's share of operating expenses is included in Sempra Energy's and SDG&E's Consolidated Statements of Operations.

SONGS STEAM GENERATOR REPLACEMENT PROJECT

The replacement steam generators, which caused a water leak due to unexpected tube wear, were designed and provided by MHI. In 2013, Edison instituted arbitration proceedings against MHI seeking recovery of damages resulting from the issues with the steam generators used in SONGS Units 2 and 3. The other SONGS co-owners, SDG&E and the City of Riverside, participated as claimants and respondents.

On March 13, 2017, the International Chamber of Commerce International Court of Arbitration Tribunal (the Tribunal) overseeing the arbitration found MHI liable for breach of contract, subject to a contractual limitation of liability, and rejected claimants' other claims. The Tribunal awarded \$118 million in damages to the SONGS co-owners, but determined that MHI was the prevailing party and awarded it 95 percent of its arbitration costs. The damage award is offset by these costs, resulting in a net award of approximately \$60 million in favor of the SONGS co-owners. SDG&E's specific allocation of the damage award is \$24 million reduced by costs awarded to MHI of approximately \$12 million, resulting in a net damage award of \$12 million, which was paid by MHI to SDG&E in March 2017. In accordance with the Amended Settlement Agreement discussed below, SDG&E recorded the proceeds from the MHI arbitration by reducing O&M for previously incurred legal costs of \$11 million, and shared the remaining \$1 million equally between ratepayers and shareholders.

SETTLEMENT AGREEMENT TO RESOLVE THE CPUC'S ORDER INSTITUTING INVESTIGATION INTO THE SONGS OUTAGE

In 2012, in response to the SONGS outage, the CPUC issued the SONGS OII, which was intended to determine the ultimate recovery of the investment in SONGS and the costs incurred since the commencement of this outage.

In 2014, the CPUC issued a final decision approving an Amended Settlement Agreement which provided for various disallowances, refunds and rate recoveries, including authorizing SDG&E to recover in rates its remaining investment in SONGS, excluding its investment in the Steam Generator Replacement Project.

In 2016, the CPUC issued two procedural rulings: the first, to reopen the record of the OII to address the issue of whether the Amended Settlement Agreement is reasonable and in the public interest, and the second, directing parties to the SONGS OII to determine whether an agreement could be reached to modify the Amended Settlement Agreement previously approved by the CPUC, to resolve allegations that unreported *ex parte* communications between Edison and the CPUC resulted in an unfair advantage at the time the settlement agreement was negotiated.

In July 2018, the CPUC approved a Revised Settlement Agreement among SDG&E, Edison, Cal PA, TURN and other intervenors that resolved all issues under consideration in the SONGS OII and made one modification to the Amended Settlement Agreement to remove the requirement to fund a GHG emissions reduction research program. In August 2018, parties to the Revised Settlement Agreement submitted a notice that they accepted the settlement agreement, as modified.

In connection with the Revised Settlement Agreement, and in exchange for the release of certain SONGS-related claims, SDG&E and Edison entered into the Utility Shareholder Agreement, described below.

Disallowances, Refunds and Recoveries

Under the Revised Settlement Agreement, SDG&E and Edison ceased rate recovery of SONGS costs as authorized under the Amended Settlement Agreement as of December 19, 2017, when the present value of their combined remaining SONGS regulatory assets equaled \$775 million, of which \$152 million represents SDG&E's share. Under the Utility Shareholder Agreement, Edison is obligated to pay SDG&E the full amount of SDG&E's revenue requirement not recovered from ratepayers, as described below. In October 2018, SDG&E began refunding to customers SONGS-related amounts recovered in rates after December 19, 2017.

Utility Shareholder Agreement

In January 2018, SDG&E and Edison entered into the Utility Shareholder Agreement under which Edison has an obligation to compensate SDG&E for the revenue requirement amounts that SDG&E will no longer recover because of the Revised Settlement Agreement. In exchange for Edison's reimbursement, the parties mutually released each other from the "SONGS Issues," a defined term that consists of 18 broad categories. The effect of the agreement is that the parties released each other from any and all claims that each party had or could have asserted related to the steam generator replacement failure and its aftermath. The Utility Shareholder Agreement became effective upon CPUC approval of the Revised Settlement Agreement. Edison's payment obligation commenced in October 2018, and amounts are due to SDG&E quarterly thereafter until April 2022. At December 31, 2018, SDG&E has a receivable from Edison, including accrued interest, totaling \$124 million, with \$40 million classified as current and \$84 million classified as noncurrent. This receivable reflects amounts Edison is obligated to pay to SDG&E in lieu of amounts SDG&E would have collected from ratepayers associated with the SONGS regulatory asset.

NUCLEAR DECOMMISSIONING AND FUNDING

As a result of Edison's decision to permanently retire SONGS Units 2 and 3, Edison began the decommissioning phase of the plant. Decommissioning of Unit 1, removed from service in 1992, is largely complete. The remaining work for Unit 1 will be done once Units 2 and 3 are dismantled and the spent fuel is removed from the site. Edison contracted with a JV of AECOM and EnergySolutions (known as SONGS Decommissioning Solutions) as the general contractor to complete the dismantlement of SONGS. The majority of the dismantlement work is expected to take 10 years. SDG&E is responsible for approximately 20 percent of the total contract price.

In accordance with state and federal requirements and regulations, SDG&E has assets held in the NDT to fund its share of decommissioning costs for SONGS Units 1, 2 and 3. The amounts collected in rates for SONGS' decommissioning are invested in the NDT, which is comprised of externally managed trust funds. Amounts held by the NDT are invested in accordance with CPUC regulations. The NDT assets are presented on the Sempra Energy and SDG&E Consolidated Balance Sheets at fair value with the offsetting credits recorded in noncurrent Regulatory Liabilities.

In March 2018, SDG&E and Edison jointly filed an application requesting CPUC approval of revised remaining decommissioning cost estimates (for costs estimated to be incurred in 2018 and beyond) for SONGS Unit 1 of \$207 million (in 2014 dollars), of which SDG&E's share is \$41 million, and SONGS Units 2 and 3 of \$3.2 billion (in 2014 dollars), of which SDG&E's share is \$638 million. In addition, SDG&E has estimated internal decommissioning costs (for costs estimated to be incurred in 2018 and beyond) of \$3 million (in 2014 dollars) for SONGS Unit 1 and \$43 million (in 2014 dollars) for SONGS Units 2 and 3. Except for the use of funds for the planning of decommissioning activities or NDT administrative costs, CPUC approval is required for SDG&E to access the NDT assets to fund SONGS decommissioning costs for Units 2 and 3. SDG&E has received authorization from the CPUC to access NDT funds of up to \$455 million for 2013 through 2019 (2019 forecasted) SONGS decommissioning costs. This includes up to \$93 million authorized by the CPUC in January 2019 to be withdrawn from the NDT for forecasted 2019 SONGS Units 2 and 3 costs as decommissioning costs are incurred. In December 2018, the CPUC issued a final decision finding the decommissioning cost estimates for SONGS Unit 1 generally reasonable with certain disallowances. The decision also found \$136 million (in 2014 dollars) of SONGS Units 2 and 3 decommissioning expenses for 2014 and \$222 million (in 2014 dollars) of SONGS Units 2 and 3 decommissioning expenses for 2015 to be reasonable.

In December 2016, the IRS and the U.S. Department of the Treasury issued proposed regulations that clarify the definition of "nuclear decommissioning costs," which are costs that may be paid for or reimbursed from a qualified trust fund. The proposed regulations state that costs related to the construction and maintenance of independent spent fuel management installations are included in the definition of "nuclear decommissioning costs." The proposed regulations will be effective prospectively once they are finalized; however, the IRS has stated that it will not challenge taxpayer positions consistent with the proposed regulations for taxable years ending on or after the date the proposed regulations were issued. SDG&E is awaiting the adoption of, or additional refinement to, the proposed regulations before determining whether the proposed regulations will allow SDG&E to access the NDT funds for reimbursement or payment of the spent fuel management costs incurred in 2017 and subsequent years. Further clarification of the proposed regulations could enable SDG&E to access the NDT to recover spent fuel management costs before Edison reaches final settlement with the DOE regarding the DOE's reimbursement of these costs. Historically, the DOE's reimbursements of spent fuel storage costs have not resulted in timely or complete recovery of these costs. We discuss the DOE's responsibility for spent nuclear fuel below. The IRS held public hearings on the proposed regulations in October 2017. It is unclear when clarification of the proposed regulations might be provided or when the proposed regulations will be finalized.

Nuclear Decommissioning Trusts

The amounts collected in rates for SONGS' decommissioning are invested in the NDT, which is comprised of externally managed trust funds. Amounts held by the trusts are invested in accordance with CPUC regulations. These trusts are shown on the Sempra Energy and SDG&E Consolidated Balance Sheets at fair value with the offsetting credits recorded in noncurrent Regulatory Liabilities.

The following table shows the fair values and gross unrealized gains and losses for the securities held in the NDT. We provide additional fair value disclosures for the NDT in Note 12.

NUCLEAR DECOMMISSIONING TRUSTS

(Dollars in millions)

	Cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
At December 31, 2018:				
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies ⁽¹⁾	\$ 52	\$ 1	\$ —	\$ 53
Municipal bonds ⁽²⁾	266	4	(1)	269
Other securities ⁽³⁾	238	1	(5)	234
Total debt securities	556	6	(6)	556
Equity securities	168	253	(10)	411
Cash and cash equivalents	7	—	—	7
Total	\$ 731	\$ 259	\$ (16)	\$ 974
At December 31, 2017:				
Debt securities:				
Debt securities issued by the U.S. Treasury and other				
U.S. government corporations and agencies	\$ 54	\$ —	\$ —	\$ 54
Municipal bonds	245	7	(2)	250
Other securities	215	3	(1)	217
Total debt securities	514	10	(3)	521
Equity securities	171	326	(1)	496
Cash and cash equivalents	16	—	—	16
Total	\$ 701	\$ 336	\$ (4)	\$ 1,033

⁽¹⁾ Maturity dates are 2019-2048.

⁽²⁾ Maturity dates are 2019-2056.

⁽³⁾ Maturity dates are 2019-2064.

The following table shows the proceeds from sales of securities in the NDT and gross realized gains and losses on those sales.

SALES OF SECURITIES IN THE NDT

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Proceeds from sales	\$ 890	\$ 1,314	\$ 1,134
Gross realized gains	42	157	111
Gross realized losses	(10)	(14)	(29)

Net unrealized gains and losses, as well as realized gains and losses that are reinvested in the NDT, are included in noncurrent Regulatory Liabilities on Sempra Energy's and SDG&E's Consolidated Balance Sheets. We determine the cost of securities in the trusts on the basis of specific identification.

ASSET RETIREMENT OBLIGATION AND SPENT NUCLEAR FUEL

SDG&E's ARO related to decommissioning costs for the SONGS units was \$626 million at December 31, 2018. That amount includes the cost to decommission Units 2 and 3, and the remaining cost to complete the decommissioning of Unit 1, which is substantially complete. The ARO at December 31, 2018 for all three units is based on a cost study prepared in 2017 that is pending CPUC approval. The ARO at December 31, 2018 for Units 2 and 3 reflects the acceleration of the start of decommissioning of these units as a result of the early closure of the plant. SDG&E's share of total decommissioning costs in 2018 dollars is approximately \$810 million.

U.S. DEPARTMENT OF ENERGY NUCLEAR FUEL DISPOSAL

Spent nuclear fuel from SONGS is currently stored on-site in an ISFSI licensed by the NRC or temporarily in spent fuel pools. In October 2015, the CCC approved Edison's application for the proposed expansion of the ISFSI at SONGS. The ISFSI expansion began construction in 2016 and is expected to be fully loaded with spent fuel in 2019 and to operate until 2049, when it is assumed that the DOE will have taken custody of all the SONGS spent fuel. The ISFSI would then be decommissioned, and the site restored to its original environmental state. Until then, SONGS owners are responsible for interim storage of spent nuclear fuel at SONGS.

The Nuclear Waste Policy Act of 1982 made the DOE responsible for accepting, transporting, and disposing of spent nuclear fuel. However, it is uncertain when the DOE will begin accepting spent nuclear fuel from SONGS. This delay results in increased costs for spent fuel storage. SDG&E will continue to support Edison in its pursuit of claims on behalf of the SONGS co-owners against the DOE for its failure to timely accept the spent nuclear fuel. In April 2016, Edison executed a spent fuel settlement agreement with the DOE for \$162 million covering damages incurred from 2006 through 2013. In May 2016, Edison refunded SDG&E \$32 million for its respective share of the damage award paid. In applying this refund, SDG&E recorded a \$23 million reduction to the SONGS regulatory asset, an \$8 million reduction of its nuclear decommissioning balancing account and a \$1 million reduction in its SONGS O&M cost balancing account.

Under the terms of the 2016 spent fuel settlement agreement, Edison filed a claim with the DOE on behalf of the SONGS co-owners in 2016 for spent fuel management costs incurred in 2014 and 2015 and a claim in 2017 for costs incurred in 2016. The DOE settled these claims with Edison in 2017 and 2018, respectively. In May 2017, SDG&E received its \$9 million respective share from Edison of the settlement for 2014 and 2015 costs incurred. In July 2018, SDG&E received its \$9 million share from Edison of the settlement for 2016 costs incurred. SDG&E recorded the proceeds of these settlements in balancing accounts or as reductions to regulatory assets for the benefit of ratepayers.

The 2016 spent fuel settlement agreement governs the submission of claims for costs incurred through December 31, 2016. It is unclear whether Edison will enter into a new settlement with the DOE or pursue litigation claims for spent fuel management costs incurred on or after January 1, 2017.

NUCLEAR INSURANCE

Edison requested and was granted approval in January 2018 by the NRC to reduce the nuclear liability and property damage insurance requirement. However, these changes in SONGS nuclear insurance levels require approval from all SONGS owners, as described below.

SDG&E and the other owners of SONGS have insurance to cover claims from nuclear liability incidents arising at SONGS. Currently, this insurance provides \$450 million in coverage limits, the maximum amount available, including coverage for acts of terrorism. In addition, the Price-Anderson Act provides an additional \$110 million of coverage. If a nuclear liability loss occurs at SONGS and exceeds the \$450 million insurance limit, this additional coverage would be available to provide a total of \$560 million in coverage limits per incident. The SFP is a program that provides additional insurance. If a nuclear liability loss occurs at any U.S. licensed/commercial reactor and exceeds the \$450 million insurance limit, all SFP participants would be required to contribute to the SFP. Effective January 5, 2018, the NRC approved Edison's request to reduce the nuclear liability insurance requirement from \$450 million to \$100 million and withdraw from participation in the SFP for SONGS. On April 5, 2018, the SONGS co-owners approved withdrawing from participation in the SFP for SONGS, but maintaining the nuclear liability insurance coverage at current levels (\$450 million). Confirmation of SONGS' withdrawal from the SFP has been received and became effective January 5, 2018.

The SONGS owners, including SDG&E, also maintain nuclear property damage insurance that exceeds the minimum federal requirements of \$1.06 billion. This insurance coverage is provided through NEIL. The NEIL policies have specific exclusions and limitations that can result in reduced or eliminated coverage. Insured members as a group are subject to retrospective premium assessments to cover losses sustained by NEIL under all issued policies. SDG&E could be assessed up to \$10.4 million of retrospective premiums based on overall member claims. All of SONGS' insurance claims arising out of the failures of the MHI replacement steam generators have been settled with NEIL. Effective January 10, 2018, the NRC approved Edison's request to reduce its minimum property damage insurance requirement for SONGS from \$1.06 billion to \$50 million. However, on April 5, 2018, the SONGS co-owners approved maintaining its current property damage insurance at \$1.5 billion, but with a new \$500 million property damage sublimit on the ISFSI.

The nuclear property insurance program includes an industry aggregate loss limit for non-certified acts of terrorism (as defined by the Terrorism Risk Insurance Act) of \$3.24 billion. This is the maximum amount that will be paid to insured members who suffer losses or damages from these non-certified terrorist acts.

NOTE 16. COMMITMENTS AND CONTINGENCIES

LEGAL PROCEEDINGS

We accrue losses for a legal proceeding when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. However, the uncertainties inherent in legal proceedings make it difficult to reasonably estimate the costs and effects of resolving these matters. Accordingly, actual costs incurred may differ materially from amounts accrued, may exceed applicable insurance coverage and could materially adversely affect our business, cash flows, results of operations, financial condition and prospects. Unless otherwise indicated, we are unable to estimate reasonably possible losses in excess of any amounts accrued.

At December 31, 2018, loss contingency accruals for legal matters, including associated legal fees, that are probable and estimable were \$200 million for Sempra Energy Consolidated, including \$2 million for SDG&E and \$147 million for SoCalGas. Amounts for Sempra Energy and SoCalGas include \$136 million for matters related to the Aliso Canyon natural gas storage facility gas leak, which we discuss below. We discuss our policy regarding accrual of legal fees in Note 1.

SDG&E

2007 Wildfire Litigation and Net Cost Recovery Status

SDG&E has resolved all litigation associated with three wildfires that occurred in October 2007.

As a result of a CPUC decision denying SDG&E's request to recover wildfire costs, SDG&E wrote off the wildfire regulatory asset, resulting in a charge of \$351 million (\$208 million after tax) in the third quarter of 2017. SDG&E continues to vigorously pursue recovery of these costs, which were incurred through settling claims brought under the doctrine of inverse condemnation. SDG&E applied to the CPUC for rehearing of its decision on January 2, 2018. On July 12, 2018, the CPUC adopted a decision denying the rehearing requests filed by SDG&E and other parties. On August 3, 2018, SDG&E filed an appeal with the California Court of Appeal seeking to reverse the CPUC's decision. The filing also asked the court to direct the CPUC to award SDG&E recovery for payments made to settle inverse condemnation claims and limit any reasonableness review to the amounts of those payments. On November 13, 2018, the California Court of Appeal denied SDG&E's petition. On November 26, 2018, SDG&E filed an appeal with the California Supreme Court seeking to reverse the decisions of the CPUC and the California Court of Appeal. In January 2019, the California Supreme Court denied SDG&E's petition. We intend to appeal the decision up to the U.S. Supreme Court seeking to reverse the CPUC's decision.

SoCalGas

Aliso Canyon Natural Gas Storage Facility Gas Leak

On October 23, 2015, SoCalGas discovered a leak at one of its injection-and-withdrawal wells, SS25, at its Aliso Canyon natural gas storage facility, located in the northern part of the San Fernando Valley in Los Angeles County. The Aliso Canyon natural gas storage facility has been operated by SoCalGas since 1972. SS25 is one of more than 100 injection-and-withdrawal wells at the storage facility. SoCalGas worked closely with several of the world's leading experts to stop the Leak, and on February 18, 2016, DOGGR confirmed that the well was permanently sealed. SoCalGas calculated that approximately 4.62 Bcf of natural gas was released from the Aliso Canyon natural gas storage facility as a result of the Leak.

As discussed in "Cost Estimates and Accounting Impact" below, SoCalGas incurred significant costs for temporary relocation, to control the well and to stop the Leak, as well as to purchase natural gas to replace that lost through the Leak. As discussed in "Local Community Mitigation Efforts" below, during the Leak and in the months following the sealing of the well, SoCalGas provided support to nearby residents who wished to temporarily relocate as a result of the Leak. These programs ended in July 2016.

SoCalGas has additionally incurred significant costs to defend against and, in certain cases settle, civil and criminal litigation arising from the Leak; to pay for the ongoing root cause analysis to investigate the technical cause of the Leak; to respond to various government and agency investigations regarding the Leak, and to comply with increased regulation imposed as a result of

the Leak. As further described below in “Civil and Criminal Litigation,” “Regulatory Proceedings” and “Governmental Investigations and Orders and Additional Regulation,” these activities are ongoing and SoCalGas anticipates that it will incur additional such costs, which may also be significant.

Local Community Mitigation Efforts. Pursuant to a directive by the DPH and orders by the LA Superior Court, SoCalGas provided temporary relocation support to residents in the nearby community who requested it. Following the permanent sealing of the well, the DPH conducted testing in certain homes in the Porter Ranch community and concluded that indoor conditions did not present a long-term health risk and that it was safe for those residents to return home.

In May 2016, the DPH also issued a directive that SoCalGas additionally professionally clean (in accordance with the proposed protocol prepared by the DPH) the homes of all residents located within the Porter Ranch Neighborhood Council boundary, or who participated in the relocation program, or who are located within a five-mile radius of the Aliso Canyon natural gas storage facility and experienced symptoms from the Leak (the Directive). SoCalGas disputes the Directive, contending that it is invalid and unenforceable, and has filed a petition for writ of mandate to set aside the Directive.

The costs incurred to remediate and stop the Leak and to mitigate local community impacts have been significant and may increase, and we may be subject to potentially significant damages, restitution, and civil, administrative and criminal fines, penalties and other costs. If any of these costs are not covered by insurance (including any costs in excess of applicable policy limits), if there are significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are not tax deductible, such amounts could have a material adverse effect on SoCalGas’ and Sempra Energy’s cash flows, financial condition and results of operations.

Civil and Criminal Litigation. As of February 21, 2019, 393 lawsuits, including approximately 48,000 plaintiffs, are pending against SoCalGas, some of which have also named Sempra Energy. All these cases, other than a matter brought by the Los Angeles County District Attorney, two complaints on behalf of certain firefighters and the federal securities class action discussed below, are coordinated before a single court in the LA Superior Court for pretrial management (the Coordination Proceeding).

Pursuant to the Coordination Proceeding, in March 2017, the individuals and business entities asserting tort and Proposition 65 claims filed a Second Amended Consolidated Master Case Complaint for Individual Actions, through which their separate lawsuits will be managed for pretrial purposes. The consolidated complaint asserts causes of action for negligence, negligence per se, private and public nuisance (continuing and permanent), trespass, inverse condemnation, strict liability, negligent and intentional infliction of emotional distress, fraudulent concealment, loss of consortium and violations of Proposition 65 against SoCalGas, with certain causes also naming Sempra Energy. The consolidated complaint seeks compensatory and punitive damages for personal injuries, lost wages and/or lost profits, property damage and diminution in property value, injunctive relief, costs of future medical monitoring, civil penalties (including penalties associated with Proposition 65 claims alleging violation of requirements for warning about certain chemical exposures), and attorneys’ fees.

In January 2017, pursuant to the Coordination Proceeding, two consolidated class action complaints were filed against SoCalGas and Sempra Energy, one on behalf of a putative class of persons and businesses who own or lease real property within a five-mile radius of the well (the Property Class Action), and a second on behalf of a putative class of all persons and entities conducting business within five miles of the facility (the Business Class Action). Both complaints assert claims for strict liability for ultra-hazardous activities, negligence and violation of the California Unfair Competition Law. The Property Class Action also asserts claims for negligence per se, trespass, permanent and continuing public and private nuisance, and inverse condemnation. The Business Class Action also asserts a claim for negligent interference with prospective economic advantage. Both complaints seek compensatory, statutory and punitive damages, injunctive relief and attorneys’ fees. In December 2017, the California Court of Appeal, Second Appellate District ruled that the purely economic damages alleged in the Business Class Action are not recoverable under the law. In February 2018, the California Supreme Court granted a petition filed by the plaintiffs to review that ruling.

In September and October of 2017, property developers filed two complaints, one of which was amended in July 2018, against SoCalGas and Sempra Energy alleging causes of action for strict liability, negligence per se, negligence, continuing nuisance, permanent nuisance and violation of the California Unfair Competition Law, as well as claims for negligence against certain directors of SoCalGas. The complaints seek compensatory, statutory and punitive damages, injunctive relief and attorneys’ fees. These claims are joined in the Coordination Proceeding.

In addition to the lawsuits described above, in October 2018 and January 2019, complaints were filed on behalf of 51 plaintiffs who are firefighters stationed near the Aliso Canyon natural gas storage facility and allege they were injured by exposure to chemicals released during the Leak. The complaints against SoCalGas and Sempra Energy assert causes of actions for negligence, negligence per se, private and public nuisance (continuing and permanent), trespass, inverse condemnation, strict liability, negligent and intentional infliction of emotional distress, fraudulent concealment and loss of consortium. The complaints seek

compensatory and punitive damages for personal injuries, lost wages and/or lost profits, property damage and diminution in property value, and attorney's fees. SoCalGas expects that these cases will be joined in the Coordination Proceeding.

In addition, a federal securities class action alleging violation of the federal securities laws has been filed against Sempra Energy and certain of its officers and certain of its directors in the SDCA. In March 2018, the District Court dismissed the action with prejudice, and in December 2018 the Court denied the plaintiffs' request for reconsideration of that order. The plaintiffs have filed a notice of appeal of the dismissal.

Five shareholder derivative actions are also pending in the Coordination Proceeding alleging breach of fiduciary duties against certain officers and certain directors of Sempra Energy and/or SoCalGas, four of which were joined in a Consolidated Shareholder Derivative Complaint in August 2017.

Three actions filed by public entities are pending in the Coordination Proceeding. First, in July 2016, the County of Los Angeles, on behalf of itself and the people of the State of California, filed a complaint against SoCalGas in the LA Superior Court for public nuisance, unfair competition, breach of franchise agreement, breach of lease, and damages. This suit alleges that the four natural gas storage fields operated by SoCalGas in Los Angeles County require safety upgrades, including the installation of a sub-surface safety shut-off valve on every well. It additionally alleges that SoCalGas failed to comply with the DPH Directive. It seeks preliminary and permanent injunctive relief, civil penalties, and damages for the County's costs to respond to the Leak, as well as punitive damages and attorneys' fees.

Second, in August 2016, the California Attorney General, acting in an independent capacity and on behalf of the people of the State of California and the CARB, together with the Los Angeles City Attorney, filed a third amended complaint on behalf of the people of the State of California against SoCalGas alleging public nuisance, violation of the California Unfair Competition Law, violations of California Health and Safety Code sections 41700 (prohibiting discharge of air contaminants that cause annoyance to the public) and 25510 (requiring reporting of the release of hazardous material), as well as California Government Code section 12607 for equitable relief for the protection of natural resources. The complaint seeks an order for injunctive relief, to abate the public nuisance, and to impose civil penalties.

Third, a petition for writ of mandate filed by the County of Los Angeles is pending against DOGGR and its State Oil and Gas Supervisor and the CPUC and its Executive Director, as to which SoCalGas is the real party in interest. The petition alleges that in issuing its July 2017 determination that the requirements for the resumption of injection operations were met (discussed under "Natural Gas Storage Operations and Reliability" below), DOGGR failed to comply with the provisions of SB 380, which requires a comprehensive safety review of the Aliso Canyon natural gas storage facility before injection of natural gas may resume. The County alleges, among other things, that DOGGR failed to comply with the provisions of SB 380 in declaring the safety review complete and authorizing the resumption of injection of natural gas into the facility before the root cause analysis was complete, failing to make its safety-review documents available to the public and failing to address seismic risks to the field as part of its safety review. The County further alleges that CEQA required DOGGR to prepare an environmental impact review before the resumption of injection of natural gas at the facility may be approved. The petition seeks a writ of mandate requiring DOGGR and the State Oil and Gas Supervisor to comply with SB 380 and CEQA, and to produce records in response to the County's Public Records Act request, as well as declaratory and injunctive relief against any authorization to inject natural gas and attorneys' fees.

In August 2018, SoCalGas entered into a settlement agreement with the Los Angeles City Attorney's Office, the County of Los Angeles, the California Office of the Attorney General and CARB (collectively, the Government Plaintiffs) to settle the three public entity actions for payments and funding for environmental projects totaling \$120 million, including \$21 million in civil penalties (the Government Plaintiffs Settlement). Under the settlement agreement, SoCalGas also agreed to continue its fence-line methane monitoring program, establish a safety committee and hire an independent ombudsman to monitor and report on the safety at the facility. This settlement also fully resolves SoCalGas' commitment to mitigate the actual natural gas released during the Leak and fulfills the requirements of the Governor's Order, described below, for SoCalGas to pay for a mitigation program developed by CARB. The Government Plaintiffs Settlement was approved by the LA Superior Court in February 2019.

Separately, in February 2016, the Los Angeles County District Attorney's Office filed a misdemeanor criminal complaint against SoCalGas seeking penalties and other remedies for alleged failure to provide timely notice of the Leak pursuant to California Health and Safety Code section 25510(a), Los Angeles County Code section 12.56.030, and Title 19 California Code of Regulations section 2703(a), and for allegedly violating California Health and Safety Code section 41700 prohibiting discharge of air contaminants that cause annoyance to the public. Pursuant to a settlement agreement with the Los Angeles County District Attorney's Office, SoCalGas agreed to plead no contest to the notice charge under Health and Safety Code section 25510(a) and agreed to pay the maximum fine of \$75,000, penalty assessments of approximately \$233,500, and operational commitments estimated to cost approximately \$6 million, reimbursements and assessments in exchange for the Los Angeles County District Attorney's Office moving to dismiss the remaining counts at sentencing and settling the complaint (the District Attorney

Settlement). In November 2016, SoCalGas completed the commitments and obligations under the District Attorney Settlement, and on November 29, 2016, the LA Superior Court approved the settlement and entered judgment on the notice charge. Certain individuals who object to the settlement have filed an appeal of the judgment, contending they should be granted restitution.

The costs of defending against these civil and criminal lawsuits, and any damages, restitution, and civil, administrative and criminal fines, penalties and other costs, if awarded or imposed, as well as the costs of mitigating the actual natural gas released, could be significant. If any of these costs are not covered by insurance (including any costs in excess of applicable policy limits), if there are significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Regulatory Proceedings. In February 2017, the CPUC opened a proceeding pursuant to SB 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility, while still maintaining energy and electric reliability for the region. The CPUC indicated it intends to conduct the proceeding in two phases, with Phase 1 undertaking a comprehensive effort to develop the appropriate analyses and scenarios to evaluate the impact of reducing or eliminating the use of the Aliso Canyon natural gas storage facility and Phase 2 using those analyses and scenarios to evaluate the impacts of reducing or eliminating the use of the Aliso Canyon natural gas storage facility.

The order establishing the scope of the proceeding expressly excludes issues with respect to air quality, public health, causation, culpability or cost responsibility regarding the Leak. In January 2019, the CPUC concluded Phase 1 of the proceeding by establishing a framework for the hydraulic, production cost and economic modeling assumptions for the potential reduction in usage or elimination of the Aliso Canyon natural gas storage facility. Phase 2 of the proceeding is expected to begin in the first quarter of 2019 and will evaluate the impacts of reducing or eliminating the Aliso Canyon natural gas storage facility using the established framework and models.

Section 455.5 of the California Public Utilities Code, among other things, directs regulated utilities to notify the CPUC if all or any portion of a major facility has been out of service for nine consecutive months. Following an OII proceeding, the CPUC ruled in September 2018 that the Aliso Canyon natural gas storage facility had not been out of service for nine consecutive months within the meaning of section 455.5.

Governmental Investigations and Orders and Additional Regulation. Various governmental agencies, including DOE, DOGGR, DPH, SCAQMD, CARB, Los Angeles Regional Water Quality Control Board, California Division of Occupational Safety and Health, CPUC, PHMSA, EPA, Los Angeles County District Attorney's Office and California Attorney General's Office, have investigated or are investigating this incident. In January 2016, DOGGR and the CPUC selected Blade Energy Partners to conduct, under their supervision, an independent analysis of the technical root cause of the Leak, to be funded by SoCalGas. The root cause analysis is ongoing, and its timing is under the control of Blade Energy Partners, DOGGR and the CPUC.

In January 2016, the Governor of the State of California proclaimed a state of emergency in Los Angeles County due to the Leak. The proclamation ordered various actions with respect to the Leak, including: (1) applicable agencies must convene an independent panel of scientific and medical experts to review public health concerns stemming from the natural gas leak and evaluate whether additional measures are needed to protect public health; (2) the CPUC must ensure that SoCalGas covers costs related to the natural gas leak and its response while protecting ratepayers; (3) CARB must develop a program, to be funded by SoCalGas, to fully mitigate the Leak's emissions of methane; and (4) DOGGR, CPUC, CARB and the CEC must submit to the Governor's Office a report that assesses the long-term viability of natural gas storage facilities in California.

In March 2016, the CARB issued its "Aliso Canyon Methane Leak Climate Impacts Mitigation Program" recommending a program to fully mitigate the emissions from the Leak. In October 2016, CARB issued a report concluding that SoCalGas should mitigate 109,000 metric tons of methane to fully mitigate the GHG impacts of the Leak. The Government Plaintiffs Settlement described above satisfies the mitigation requirement of the Governor's emergency proclamation.

Cost Estimates and Accounting Impact. At December 31, 2018, SoCalGas estimates its costs related to the Leak are \$1,055 million (the cost estimate), which includes \$1,027 million of costs recovered or probable of recovery from insurance. Approximately 54 percent of the cost estimate is for the temporary relocation program (including cleaning costs and certain labor costs). The remaining portion of the cost estimate includes costs incurred to defend litigation, for the root cause analysis being conducted by an independent third party, for efforts to control the well, to mitigate the actual natural gas released, for the cost of replacing the lost gas, and other costs, as well as the estimated costs to settle certain actions. SoCalGas adjusts the cost estimate as additional information becomes available. A substantial portion of the cost estimate has been paid, and \$160 million is accrued as Reserve for Aliso Canyon Costs as of December 31, 2018 on SoCalGas' and Sempra Energy's Consolidated Balance Sheets.

As of December 31, 2018, we recorded the expected recovery of the cost estimate related to the Leak of \$461 million as Insurance Receivable for Aliso Canyon Costs on SoCalGas' and Sempra Energy's Consolidated Balance Sheets. This amount is net of insurance retentions and \$566 million of insurance proceeds we received through December 31, 2018 related to portions of the cost estimate described above, including temporary relocation and associated processing costs, control-of-well expenses, legal costs and lost gas. If we were to conclude that this receivable or a portion of it is no longer probable of recovery from insurers, some or all of this receivable would be charged against earnings, which could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

As described in "Civil and Criminal Litigation" above, the actions seek compensatory, statutory and punitive damages, restitution, and civil, administrative and criminal fines, penalties and other costs, which, except for the amounts paid or estimated to settle certain actions, are not included in the cost estimate as it is not possible at this time to predict the outcome of these actions or reasonably estimate the amount of damages, restitution or civil, administrative or criminal fines, penalties or other costs that may be imposed. The recorded amounts above also do not include the costs to clean additional homes pursuant to the Directive, future legal costs necessary to defend litigation, and other potential costs that we currently do not anticipate incurring or that we cannot reasonably estimate. Furthermore, the cost estimate does not include certain other costs incurred by Sempra Energy associated with defending against shareholder derivative lawsuits.

Insurance. Excluding directors' and officers' liability insurance, we have at least four kinds of insurance policies that together we estimate provide between \$1.2 billion to \$1.4 billion in insurance coverage, depending on the nature of the claims. We cannot predict all of the potential categories of costs or the total amount of costs that we may incur as a result of the Leak. Subject to various policy limits, exclusions and conditions, based on what we know as of the filing date of this report, we believe that our insurance policies collectively should cover the following categories of costs: costs incurred for temporary relocation and associated processing costs (including cleaning costs and certain labor costs), costs to address the Leak and stop or reduce emissions, the root cause analysis being conducted to investigate the cause of the Leak, the value of lost gas, costs incurred to mitigate the actual natural gas released, costs associated with litigation and claims by nearby residents and businesses, any costs to clean additional homes pursuant to the Directive, and, in some circumstances depending on their nature and manner of assessment, fines and penalties. We have been communicating with our insurance carriers and, as discussed above, we have received insurance payments for portions of the costs described above, including temporary relocation and associated processing costs, control-of-well expenses, legal costs and lost gas. We intend to pursue the full extent of our insurance coverage for the costs we have incurred or may incur. There can be no assurance that we will be successful in obtaining additional insurance recovery for these costs, and to the extent we are not successful in obtaining coverage or these costs exceed the amount of our coverage, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

At December 31, 2018, SoCalGas' estimate of costs related to the Leak of \$1,055 million include \$1,027 million of costs recovered or probable of recovery from insurance. This estimate may rise significantly as more information becomes available. Costs not included in the \$1,055 million cost estimate could be material. If any costs are not covered by insurance (including any costs in excess of applicable policy limits), if there are significant delays in receiving insurance recoveries, or if the insurance recoveries are subject to income taxes while the associated costs are not tax deductible, such amounts could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Natural Gas Storage Operations and Reliability. Natural gas withdrawn from storage is important for service reliability during peak demand periods, including peak electric generation needs in the summer and heating needs in the winter. The Aliso Canyon natural gas storage facility, with a capacity of 86 Bcf (representing 63 percent of SoCalGas' natural gas storage capacity), is the largest SoCalGas storage facility and an important element of SoCalGas' delivery system. As a result of the Leak, SoCalGas suspended injection of natural gas into the Aliso Canyon natural gas storage facility beginning in October 2015, and following a comprehensive safety review and authorization by DOGGR and the CPUC's Executive Director, resumed limited injection operations in July 2017.

During the suspension period, SoCalGas advised the California ISO, CEC, CPUC and PHMSA of its concerns that the inability to inject natural gas into the Aliso Canyon natural gas storage facility posed a risk to energy reliability in Southern California. The CPUC has issued a series of directives to SoCalGas establishing the range of working gas to be maintained in the Aliso Canyon natural gas storage facility to help ensure safety and reliability for the region and just and reasonable rates in California, the most recent of which, issued July 2, 2018, directed SoCalGas to maintain up to 34 Bcf of working gas. Limited withdrawals of natural gas from the facility were made in 2018 to augment natural gas supplies during critical demand periods.

If the Aliso Canyon natural gas storage facility were to be permanently closed, or if future cash flows were otherwise insufficient to recover its carrying value, it could result in an impairment of the facility and significantly higher than expected operating costs and/or additional capital expenditures, and natural gas reliability and electric generation could be jeopardized. At December 31,

2018, the Aliso Canyon natural gas storage facility had a net book value of \$724 million. Any significant impairment of this asset could have a material adverse effect on SoCalGas' and Sempra Energy's results of operations for the period in which it is recorded. Higher operating costs and additional capital expenditures incurred by SoCalGas may not be recoverable in customer rates, and could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Sempra Mexico

Property Disputes and Permit Challenges

Energía Costa Azul. Sempra Mexico has been engaged in a long-running land dispute relating to property adjacent to its ECA LNG terminal near Ensenada, Mexico. A claimant to the adjacent property filed complaints in the federal Agrarian Court challenging the refusal of SEDATU in 2006 to issue a title to him for the disputed property. In November 2013, the federal Agrarian Court ordered that SEDATU issue the requested title and cause it to be registered. Both SEDATU and Sempra Mexico challenged the ruling, due to lack of notification of the underlying process. Both challenges are pending to be resolved by a Federal Court in Mexico. Sempra Mexico expects additional proceedings regarding the claims.

Several administrative challenges are pending in Mexico before the Mexican environmental protection agency and the Federal Tax and Administrative Courts seeking revocation of the environmental impact authorization issued to ECA in 2003. These cases generally allege that the conditions and mitigation measures in the environmental impact authorization are inadequate and challenge findings that the activities of the terminal are consistent with regional development guidelines.

Additionally, in August 2018, a claimant filed a challenge in the federal district court in Ensenada, Baja California in relation to the environmental and social impact permits issued to ECA in September 2017 and December 2017, respectively, to allow natural gas liquefaction activities at the ECA LNG terminal. The court issued a provisional injunction on September 28, 2018 that has uncertain application and requires clarification by the court, which is being pursued through additional proceedings. In December 2018, the relevant Mexican regulators approved the requested modifications to the permits to allow natural gas liquefaction activities at the ECA LNG terminal.

Cases involving two parcels of real property have been filed against ECA. In one case, filed in the federal Agrarian Court in 2006, the plaintiffs seek to annul the recorded property title for a parcel on which the ECA LNG terminal is situated and to obtain possession of a different parcel that allegedly sits in the same place. Another civil complaint filed in the state court was served in April 2012 seeking to invalidate the contract by which ECA purchased another of the terminal parcels, on the grounds the purchase price was unfair; the plaintiff filed a second complaint in 2013 in the federal Agrarian Court seeking an order that SEDATU issue title to her. In January 2016, the federal Agrarian Court ruled against the plaintiff, and the plaintiff appealed the ruling. In May 2018, the state court dismissed the civil complaint, and the plaintiff has appealed. Sempra Mexico expects further proceedings on these two matters.

Guaymas-El Oro Segment of the Sonora Pipeline. IEnova's Sonora natural gas pipeline consists of two segments, the Sasabe-Puerto Libertad-Guaymas segment, and the Guaymas-El Oro segment. Each segment has its own service agreement with the CFE. In 2015, the Yaqui tribe, with the exception of some members living in the Bécum community, granted its consent and a right-of-way easement agreement for the construction of the Guaymas-El Oro segment of the Sonora natural gas pipeline that crosses its territory. Representatives of the Bécum community filed a legal challenge in Mexican Federal Court demanding the right to withhold consent for the project, the stoppage of work in the Yaqui territory and damages. In 2016, the judge granted a suspension order that prohibited the construction of such segment through the Bécum community territory. Because the pipeline does not pass through the Bécum community, IEnova did not believe the 2016 suspension order prohibited construction in the remainder of the Yaqui territory. Because of the dispute, however, IEnova was delayed in the construction of approximately 14 kilometers of pipeline that pass through territory of the Yaqui tribe. IEnova declared a force majeure under its contract with the CFE as a result of such construction delays. The CFE agreed to extend the deadline for commercial operations of the Guaymas-El Oro segment until the second quarter of 2017 and to pay fixed charge payments pursuant to the service agreement during such extension. Construction of the Guaymas-El Oro segment was completed, and commercial operations began in May 2017.

Following the start of commercial operations of the Guaymas-El Oro segment, an appellate court ruled that the scope of the 2016 suspension order encompassed the wider Yaqui territory. The legal challenge remains pending. IEnova has subsequently reported damage and declared a force majeure event for the Guaymas-El Oro segment of the Sonora pipeline in the Yaqui territory that has interrupted its operations since August 23, 2017. IEnova will continue to exercise its rights under the contract, which includes seeking (i) force majeure payments; and (ii) just compensation following the expiration of the two-year period such force majeure payments are required to be made. The Sasabe-Puerto Libertad-Guaymas segment of the Sonora pipeline remains in full operation.

Other Litigation

Sempra Energy holds an NCI in RBS Sempra Commodities, a limited liability partnership in the process of being liquidated. NatWest Markets plc, formerly RBS, our partner in the JV, paid an assessment of £86 million (approximately \$138 million in U.S. dollars) in October 2014 to HMRC for denied VAT refund claims filed in connection with the purchase of carbon credit allowances by RBS SEE, a subsidiary of RBS Sempra Commodities. RBS SEE has since been sold to JP Morgan and later to Mercuria Energy Group, Ltd. HMRC asserted that RBS was not entitled to reduce its VAT liability by VAT paid on certain carbon credit purchases during 2009 because RBS knew or should have known that certain vendors in the trading chain did not remit their own VAT to HMRC. After paying the assessment, RBS filed a Notice of Appeal of the assessment with the First-Tier Tribunal. Trial on the matter has not been scheduled.

During 2015, liquidators filed a claim in the High Court of Justice against RBS and Mercuria Energy Europe Trading Limited (the Defendants) on behalf of ten companies (the Liquidating Companies) that engaged in carbon credit trading via chains that included a company that traded directly with RBS SEE. The claim alleges that the Defendants' participation in the purchase and sale of carbon credits resulted in the Liquidating Companies' carbon credit trading transactions creating a VAT liability they were unable to pay, and that the Defendants are liable to provide for equitable compensation due to dishonest assistance and for compensation under the U.K. Insolvency Act of 1986. Trial on the matter was held in June and July of 2018, at the close of which the Liquidating Companies asserted that the Defendants were liable to the Liquidating Companies in the amount of £71.5 million (approximately \$91 million in U.S. dollars at December 31, 2018) for dishonest assistance and, to the extent that claim is unsuccessful, to the liquidators in the same amount under the U.K. Insolvency Act of 1986. If the High Court of Justice finds the Defendants liable, it will determine the amount. JP Morgan has notified us that Mercuria Energy Group, Ltd. has sought indemnity for the claim, and JP Morgan has in turn sought indemnity from Sempra Energy and RBS.

While the ultimate outcome remains uncertain, we continue to evaluate the likelihood of recovery of our investment. Accordingly, in the third quarter of 2018, we fully impaired our remaining \$65 million equity method investment in RBS Sempra Commodities, which is included in Equity Earnings on Sempra Energy's Consolidated Statement of Operations.

Certain EFH subsidiaries that we acquired as part of the Merger are defendants in personal injury lawsuits brought in state courts throughout the U.S. As of February 21, 2019, 119 such lawsuits are pending, and 1,685 such lawsuits have been filed but not served. These cases allege illness or death as a result of exposure to asbestos in power plants designed and/or built by companies whose assets were purchased by predecessor entities to the EFH subsidiaries, and generally assert claims for product defects, negligence, strict liability and wrongful death. They seek compensatory and punitive damages. Additionally, in connection with the EFH bankruptcy proceeding, approximately 28,000 proofs of claim were filed on behalf of persons who allege exposure to asbestos under similar circumstances and assert the right to file such lawsuits in the future. We anticipate additional lawsuits will be filed. None of these claims or lawsuits were discharged in the EFH bankruptcy proceeding.

We are also defendants in ordinary routine litigation incidental to our businesses, including personal injury, employment litigation, product liability, property damage and other claims. Juries have demonstrated an increasing willingness to grant large awards, including punitive damages, in these types of cases.

CONTRACTUAL COMMITMENTS

Natural Gas Contracts

SoCalGas has the responsibility for procuring natural gas for both SDG&E's and SoCalGas' core customers in a combined portfolio. SoCalGas buys natural gas under short-term and long-term contracts for this portfolio. Purchases are from various producing regions in the southwestern U.S., U.S. Rockies and Canada and are primarily based on published monthly bid-week indices.

SoCalGas transports natural gas primarily under long-term firm interstate pipeline capacity agreements that provide for annual reservation charges, which are recovered in rates. SoCalGas has commitments with interstate pipeline companies for firm pipeline capacity under contracts that expire at various dates through 2031.

Sempra LNG & Midstream's and Sempra Mexico's businesses have various capacity agreements for natural gas storage and transportation. In addition, Sempra Mexico has a natural gas purchase agreement to fuel a natural gas-fired power plant.

In May 2016, Sempra LNG & Midstream permanently released certain pipeline capacity that it held with Rockies Express and others. The effect of the permanent capacity releases resulted in a pretax charge of \$206 million (\$123 million after tax), which is included in Other Cost of Sales on the Sempra Energy Consolidated Statement of Operations. The charge represented an acceleration of costs that would otherwise have been recognized over the duration of the contracts. Sempra LNG & Midstream

has recorded a liability for these costs, less expected proceeds generated from the permanent capacity releases. Sempra LNG & Midstream's related obligation to make future capacity payments through November 2019 is included in the table below.

In May 2017, Sempra LNG & Midstream received settlement proceeds of \$57 million from a breach of contract claim against a counterparty in bankruptcy court. Of the total proceeds, \$47 million related to the \$206 million charge we recorded in 2016 resulting from the permanent release of certain pipeline capacity. Sempra LNG & Midstream recorded the settlement proceeds as a reduction to Other Cost of Sales on Sempra Energy's Consolidated Statement of Operations in 2017.

At December 31, 2018, the future estimated payments under existing natural gas contracts and natural gas storage and transportation contracts are as follows:

FUTURE ESTIMATED PAYMENTS – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Storage and transportation	Natural gas ⁽¹⁾	Total ⁽¹⁾
2019	\$ 230	\$ 33	\$ 263
2020	158	15	173
2021	144	12	156
2022	73	12	85
2023	50	13	63
Thereafter	262	18	280
Total estimated payments	\$ 917	\$ 103	\$ 1,020

⁽¹⁾ Excludes amounts related to the LNG purchase agreement discussed below.

FUTURE ESTIMATED PAYMENTS – SOCALGAS

(Dollars in millions)

	Transportation	Natural gas	Total
2019	\$ 114	\$ 12	\$ 126
2020	118	4	122
2021	104	—	104
2022	37	—	37
2023	23	1	24
Thereafter	49	—	49
Total estimated payments	\$ 445	\$ 17	\$ 462

Total payments under natural gas contracts and natural gas storage and transportation contracts as well as payments to meet additional portfolio needs at Sempra Energy Consolidated and SoCalGas were as follows:

PAYMENTS UNDER NATURAL GAS CONTRACTS

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated	\$ 1,345	\$ 1,429	\$ 1,169
SoCalGas	1,169	1,213	966

LNG Purchase Agreement

Sempra LNG & Midstream has a sale and purchase agreement for the supply of LNG to the ECA terminal. The commitment amount is calculated using a predetermined formula based on estimated forward prices of the index applicable from 2019 to 2029. Although this agreement specifies a number of cargoes to be delivered, under its terms, the customer may divert certain cargoes, which would reduce amounts paid under the agreement by Sempra LNG & Midstream.

At December 31, 2018, the following LNG commitment amounts are based on the assumption that all cargoes, less those already confirmed to be diverted, under the agreement are delivered:

LNG COMMITMENT AMOUNTS		
<i>(Dollars in millions)</i>		
2019	\$	289
2020		372
2021		368
2022		373
2023		385
Thereafter		2,475
Total	\$	4,262

Actual LNG purchases in 2018, 2017 and 2016 have been significantly lower than the maximum amount provided under the agreement due to the customer electing to divert most cargoes as allowed by the agreement.

Purchased-Power Contracts

For 2019, SDG&E expects to meet its customer power requirements from the following resource types:

- Long-term contracts: 37 percent (of which 36 percent is provided by renewable energy contracts expiring on various dates through 2041)
- Other SDG&E-owned generation and tolling contracts (including OMEC): 55 percent
- Spot market purchases: 8 percent

Chilquinta Energía and Luz del Sur also have purchased-power contracts, expiring on various dates extending through 2031, which cover most of the consumption needs of the companies' customers. These commitments are included under Sempra Energy Consolidated in the table below.

At December 31, 2018, the future estimated payments under long-term purchased-power contracts are as follows:

FUTURE ESTIMATED PAYMENTS – PURCHASED-POWER CONTRACTS			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated		SDG&E
2019	\$	654	\$ 527
2020		629	510
2021		631	510
2022		592	496
2023		549	451
Thereafter		5,185	5,026
Total estimated payments ⁽¹⁾⁽²⁾	\$	8,240	\$ 7,520

⁽¹⁾ Excludes purchase agreements accounted for as capital leases and amounts related to Otay Mesa VIE, as it is consolidated by Sempra Energy and SDG&E.

⁽²⁾ Includes \$5.2 billion of expected payments under purchase agreements accounted for as operating leases at SDG&E, comprised of renewable energy PPAs for which there are no future minimum operating lease payments.

Payments on these contracts represent capacity charges and minimum energy and transmission purchases that exceed the minimum commitment. SDG&E and Luz del Sur are required to pay additional amounts for actual purchases of energy that exceed the minimum energy commitments. Total payments under purchased-power contracts were as follows:

PAYMENTS UNDER PURCHASED-POWER CONTRACTS	<i>(Dollars in millions)</i>		
	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated	\$ 1,582	\$ 1,694	\$ 1,667
SDG&E	712	781	752

Operating Leases

Sempra Energy Consolidated, SDG&E and SoCalGas have operating leases on real and personal property expiring at various dates from 2019 through 2042. Certain leases on office facilities contain escalation clauses requiring annual increases in rent ranging from two percent to five percent at Sempra Energy Consolidated, SDG&E and SoCalGas. The rentals payable under these leases may increase by a fixed amount each year or by a percentage of a base year, and most leases contain extension options that we could exercise.

The California Utilities have operating lease agreements for future acquisitions of fleet vehicles with an aggregate maximum lease limit of \$201 million, \$130 million of which has been utilized as of December 31, 2018.

Rent expense for operating leases was as follows:

RENT EXPENSE – OPERATING LEASES (Dollars in millions)	Years ended December 31,		
	2018	2017	2016
	Sempra Energy Consolidated	\$ 123	\$ 109
SDG&E	27	28	28
SoCalGas	41	43	38

At December 31, 2018, the rental commitments payable in future years under all noncancelable operating leases, including estimated payments, are as follows:

FUTURE RENTAL PAYMENTS – OPERATING LEASES (Dollars in millions)	2019	2020	2021	2022	2023	Thereafter	Total
	Sempra Energy Consolidated:						
Future minimum lease payments	\$ 79	\$ 56	\$ 54	\$ 51	\$ 44	\$ 259	\$ 543
Future estimated rental payments	12	12	13	13	13	44	107
Total future rental commitments	\$ 91	\$ 68	\$ 67	\$ 64	\$ 57	\$ 303	\$ 650
SDG&E:							
Future minimum lease payments	\$ 23	\$ 22	\$ 22	\$ 21	\$ 17	\$ 48	\$ 153
Future estimated rental payments	2	2	2	2	2	7	17
Total future rental commitments	\$ 25	\$ 24	\$ 24	\$ 23	\$ 19	\$ 55	\$ 170
SoCalGas:							
Future minimum lease payments	\$ 26	\$ 22	\$ 21	\$ 20	\$ 16	\$ 28	\$ 133
Future estimated rental payments	10	10	11	11	11	37	90
Total future rental commitments	\$ 36	\$ 32	\$ 32	\$ 31	\$ 27	\$ 65	\$ 223

Capital Leases

Power Purchase Agreements

SDG&E has six PPAs with peaker plant facilities, one of which went into commercial operation in December 2018. All are accounted for as capital leases, four with a 25-year term, one with a 20-year term and one with a 9-year term. At December 31, 2018, the aggregate carrying value of these capital lease obligations was \$1,270 million. The entities that own the peaker plant facilities are VIEs of which SDG&E is not the primary beneficiary. SDG&E does not have any additional implicit or explicit financial responsibility related to these VIEs.

At December 31, 2018, the future minimum lease payments and present value of the net minimum lease payments under these capital leases for both Sempra Energy Consolidated and SDG&E are as follows:

FUTURE MINIMUM PAYMENTS – POWER PURCHASE AGREEMENTS	
<i>(Dollars in millions)</i>	
2019	\$ 210
2020	210
2021	211
2022	211
2023	211
Thereafter	<u>3,196</u>
Total minimum lease payments ⁽¹⁾	4,249
Less: estimated executory costs	(480)
Less: interest ⁽²⁾	<u>(2,483)</u>
Present value of net minimum lease payments ⁽³⁾	<u>\$ 1,286</u>

⁽¹⁾ This expense receives ratemaking treatment consistent with purchased-power costs, which are recovered in rates and have been recorded over the lives of the leases as Cost of Electric Fuel and Purchased Power on Sempra Energy's and SDG&E's Consolidated Statements of Operations. See discussion in Note 2 regarding the classification of this expense after adoption of the new lease standard in 2019.

⁽²⁾ Amount necessary to reduce net minimum lease payments to present value at the inception of the leases.

⁽³⁾ Includes \$15 million in Current Portion of Long-Term Debt and \$1,255 million in Long-Term Debt on Sempra Energy's and SDG&E's Consolidated Balance Sheets at December 31, 2018. The remaining present value of net minimum lease payments of \$16 million will be recorded as finance leases when construction of the battery storage facilities is completed and delivery of contracted power commences.

The annual amortization charge for the PPAs was \$11 million, \$8 million and \$4 million in 2018, 2017 and 2016, respectively.

Headquarters Build-to-Suit Lease

Sempra Energy has a 25-year, build-to-suit lease for its San Diego, California, headquarters completed in 2015. As a result of our involvement during and after the construction period, we have recorded the related assets and financing liability for construction costs incurred under this build-to-suit leasing arrangement. See discussion in Note 2 regarding the expected impact on this build-to-suit lease from the adoption of the new lease standard in 2019.

The building is being depreciated on a straight-line basis over its estimated useful life and the associated lease payments are allocated between interest expense and amortization of the financing obligation over the lease period. Further, a portion of the lease payments pertain to the lease of the underlying land and are recorded as rental expense. The balance of the financing obligation, representing the net present value of the future minimum lease payments on the building, is \$138 million at December 31, 2018.

At December 31, 2018, the future minimum lease payments on the lease are as follows:

FUTURE MINIMUM PAYMENTS – BUILD-TO-SUIT LEASE	
<i>(Dollars in millions)</i>	
2019	\$ 10
2020	11
2021	11
2022	11
2023	11
Thereafter	<u>217</u>
Total minimum lease payments	<u>\$ 271</u>

Other Capital Leases

At December 31, 2018, the future minimum lease payments under capital leases for fleet vehicles and other assets for Sempra Energy Consolidated are \$6 million in 2019, \$2 million in 2020, \$1 million in 2021, negligible amounts in 2022 and 2023 and \$9 million thereafter. The net present value of the minimum lease payments is \$11 million at December 31, 2018.

At December 31, 2018, SDG&E and SoCalGas have capital lease obligations for fleet vehicles of \$2 million and \$3 million, respectively, all of which are payable in 2019.

The annual depreciation charge for fleet vehicles and other assets in 2018, 2017 and 2016 was \$8 million, \$3 million and \$2 million, respectively, at Sempra Energy Consolidated, including \$2 million, \$1 million and \$1 million, respectively, at SDG&E and \$6 million, \$2 million and \$1 million, respectively, at SoCalGas.

Construction and Development Projects

Sempra Energy Consolidated has various capital projects in progress in the U.S., Mexico and South America. Sempra Energy's total commitments at December 31, 2018 under these projects are approximately \$686 million, requiring future payments of \$396 million in 2019, \$86 million in 2020, \$43 million in 2021, \$28 million in 2022, \$18 million in 2023 and \$115 million thereafter. The following is a summary by segment of contractual commitments and contingencies related to such projects.

SDG&E

At December 31, 2018, SDG&E has commitments to make future payments of \$144 million for construction projects that include:

- \$135 million for infrastructure improvements for electric and natural gas transmission and distribution systems; and
- \$9 million related to spent fuel management at SONGS.

SDG&E expects future payments under these contractual commitments to be \$43 million in 2019, \$62 million in 2020, \$22 million in 2021, \$11 million in 2022, \$2 million in 2023 and \$4 million thereafter.

Sempra South American Utilities

At December 31, 2018, Sempra South American Utilities has commitments to make future payments of \$14 million for the construction of substations and related transmission lines in Peru. The future payments under these contractual commitments are all expected to be made in 2019.

Sempra Mexico

At December 31, 2018, Sempra Mexico has commitments to make future payments of \$469 million for construction projects that include:

- \$266 million for natural gas pipelines and ongoing maintenance services;
- \$94 million for liquid fuels terminals; and
- \$109 million for renewables projects.

Sempra Mexico expects future payments under these contractual commitments to be \$287 million in 2019, \$21 million in 2020, \$18 million in 2021, \$16 million in 2022, \$16 million in 2023 and \$111 million thereafter.

Sempra Renewables

At December 31, 2018, Sempra Renewables has commitments to make future payments of \$13 million for contracts related to its wind assets. Sempra Renewables expects future payments under these contractual commitments to be \$6 million in 2019, \$3 million in 2020, \$3 million in 2021 and \$1 million in 2022.

Sempra LNG & Midstream

At December 31, 2018, Sempra LNG & Midstream has commitments to make future payments of \$46 million primarily for LNG liquefaction development costs and natural gas transportation projects. The future payments under these contractual commitments are all expected to be made in 2019.

OTHER COMMITMENTS

SDG&E

We discuss nuclear insurance and nuclear fuel disposal related to SONGS in Note 15.

In connection with the completion of the Sunrise Powerlink project in 2012, the CPUC required that SDG&E establish a fire mitigation fund to minimize the risk of fire as well as reduce the potential wildfire impact on residences and structures near the Sunrise Powerlink. The future payments for these contractual commitments, for which a liability has been recorded, are expected to be \$3 million per year in 2019 through 2023 and \$105 million thereafter, subject to escalation of 2 percent per year, for a

remaining 51-year period. At December 31, 2018, the present value of these future payments of \$120 million has been recorded as a regulatory asset as the amounts represent a cost that is expected to be recovered from customers in the future.

Sempra LNG & Midstream

Additional consideration for a 2006 comprehensive legal settlement with the State of California to resolve the Continental Forge litigation included an agreement that, for a period of 18 years beginning in 2011, Sempra LNG & Midstream would sell to the California Utilities, subject to annual CPUC approval, up to 500 MMcf per day of regasified LNG from Sempra Mexico's ECA facility that is not delivered or sold in Mexico at the price indexed to the California border minus \$0.02 per MMBtu. There are no specified minimums required, and to date, Sempra LNG & Midstream has not been required to deliver any natural gas pursuant to this agreement.

ENVIRONMENTAL ISSUES

Our operations are subject to federal, state and local environmental laws. We also are subject to regulations related to hazardous wastes, air and water quality, land use, solid waste disposal and the protection of wildlife. These laws and regulations require that we investigate and correct the effects of the release or disposal of materials at sites associated with our past and our present operations. These sites include those at which we have been identified as a PRP under the federal Superfund laws and similar state laws.

In addition, we are required to obtain numerous governmental permits, licenses and other approvals to construct facilities and operate our businesses. The related costs of environmental monitoring, pollution control equipment, cleanup costs, and emissions fees are significant. Increasing national and international concerns regarding global warming and mercury, carbon dioxide, nitrogen oxide and sulfur dioxide emissions could result in requirements for additional pollution control equipment or significant emissions fees or taxes that could adversely affect Sempra LNG & Midstream and Sempra Mexico. The California Utilities' costs to operate their facilities in compliance with these laws and regulations generally have been recovered in customer rates.

We discuss environmental matters related to the natural gas leak at SoCalGas' Aliso Canyon natural gas storage facility above in "Legal Proceedings – SoCalGas – Aliso Canyon Natural Gas Storage Facility Gas Leak."

Other Environmental Issues

We generally capitalize the significant costs we incur to mitigate or prevent future environmental contamination or extend the life, increase the capacity, or improve the safety or efficiency of property used in current operations. The following table shows our capital expenditures (including construction work in progress) in order to comply with environmental laws and regulations:

CAPITAL EXPENDITURES FOR ENVIRONMENTAL ISSUES

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Sempra Energy Consolidated ⁽¹⁾	\$ 101	\$ 92	\$ 53
SDG&E	38	46	17
SoCalGas	62	45	35

⁽¹⁾ *In cases of non-wholly owned affiliates, includes only our share.*

We have not identified any significant environmental issues outside the U.S.

At the California Utilities, costs that relate to current operations or an existing condition caused by past operations are generally recorded as a regulatory asset due to the probability that these costs will be recovered in rates.

The environmental issues currently facing us, except for those related to the Aliso Canyon natural gas storage facility leak as we discuss above or resolved during the last three years, include (1) investigation and remediation of the California Utilities' manufactured-gas sites, (2) cleanup of third-party waste-disposal sites used by the California Utilities at sites for which we have been identified as a PRP and (3) mitigation of damage to the marine environment caused by the cooling-water discharge from SONGS.

The table below shows the status at December 31, 2018 of the California Utilities' manufactured-gas sites and the third-party waste-disposal sites for which we have been identified as a PRP:

STATUS OF ENVIRONMENTAL SITES		
	# Sites complete ⁽¹⁾	# Sites in process
SDG&E:		
Manufactured-gas sites	3	—
Third-party waste-disposal sites	2	1
SoCalGas:		
Manufactured-gas sites	39	3
Third-party waste-disposal sites	5	2

⁽¹⁾ There may be ongoing compliance obligations for completed sites, such as regular inspections, adherence to land use covenants and water quality monitoring.

We record environmental liabilities at undiscounted amounts when our liability is probable and the costs can be reasonably estimated. In many cases, however, investigations are not yet at a stage where we can determine whether we are liable or, if the liability is probable, to reasonably estimate the amount or range of amounts of the costs. Estimates of our liability are further subject to uncertainties such as the nature and extent of site contamination, evolving cleanup standards and imprecise engineering evaluations. We review our accruals periodically and, as investigations and cleanups proceed, we make adjustments as necessary.

The following table shows our accrued liabilities for environmental matters at December 31, 2018:

ACCRUED LIABILITIES FOR ENVIRONMENTAL MATTERS					
<i>(Dollars in millions)</i>					
	Manufactured-gas sites	Waste disposal sites (PRP) ⁽¹⁾	Other hazardous waste sites	Total ⁽²⁾	
SDG&E ⁽³⁾	\$ —	\$ 2	\$ 3	\$ 5	\$ 5
SoCalGas ⁽⁴⁾	30	1	—	31	31
Other	—	1	—	1	1
Total Sempra Energy	\$ 30	\$ 4	\$ 3	\$ 37	\$ 37

⁽¹⁾ Sites for which we have been identified as a PRP.

⁽²⁾ Includes \$10 million, \$1 million and \$9 million classified as current liabilities, and \$27 million, \$4 million and \$22 million classified as noncurrent liabilities on Sempra Energy's, SDG&E's and SoCalGas' Consolidated Balance Sheets, respectively.

⁽³⁾ Does not include SDG&E's liability for SONGS marine environment mitigation.

⁽⁴⁾ Does not include SoCalGas' liability for environmental matters for the Leak at the Aliso Canyon natural gas storage facility. We discuss matters related to the Leak above in "Legal Proceedings – SoCalGas – Aliso Canyon Natural Gas Storage Facility Gas Leak."

We expect to pay the majority of these accruals over the next three years.

In connection with the issuance of operating permits, SDG&E and the other owners of SONGS previously reached an agreement with the CCC to mitigate the damage to the marine environment caused by the cooling-water discharge from SONGS during its operation. SONGS' early retirement, described in Note 15, does not reduce SDG&E's mitigation obligation. SDG&E's share of the estimated mitigation costs is \$68 million, of which \$45 million has been incurred through December 31, 2018 and \$23 million is accrued for remaining costs through 2050, which is recoverable in rates and included in noncurrent Regulatory Assets on Sempra Energy's and SDG&E's Consolidated Balance Sheets. The requirements for enhanced fish protection and restoration of coastal wetlands for the SONGS mitigation are in process. Work on the artificial reef that was dedicated in 2008 continues. The CCC has stated that it now requires an expansion of the reef because the existing reef may be too small to consistently meet the performance standards. In December 2016, SDG&E and Edison filed a joint application with the CPUC seeking rate recovery of the costs of the reef expansion. In October 2017, SDG&E, Edison, TURN and Cal PA filed a joint motion requesting approval of a settlement agreement that amends the rate recovery application and allows costs to be recorded to a memorandum account until rate recovery is approved. The CPUC approved the settlement agreement in March 2018. In accordance with the settlement agreement, an updated cost forecast will be submitted to the CPUC for rate recovery approval when the project's coastal development permit is approved. We expect to submit the updated cost forecast in 2019. Rates, if approved, would be effective January 2020. SDG&E's share of the reef expansion costs currently forecasted through 2023 is \$4 million.

CONCENTRATION OF CREDIT RISK

We maintain credit policies and systems designed to manage our overall credit risk. These policies include an evaluation of potential counterparties' financial condition and an assignment of credit limits. These credit limits are established based on risk and return considerations under terms customarily available in the industry. We grant credit to utility customers and counterparties, substantially all of whom are located in our service territory, which covers most of Southern California and a portion of central California for SoCalGas, and all of San Diego County and an adjacent portion of Orange County for SDG&E. We also grant credit to utility customers and counterparties of our other companies providing natural gas or electric services in Mexico, Chile and Peru.

Projects and businesses owned or partially owned by Sempra Energy place significant reliance on the ability of their suppliers, customers and partners to perform on long-term agreements and on our ability to enforce contract terms in the event of nonperformance. We consider many factors, including the negotiation of supplier and customer agreements, when we evaluate and approve development projects and investment opportunities.

NOTE 17. SEGMENT INFORMATION

We have seven separately managed reportable segments, as follows:

- *SDG&E* provides electric service to San Diego and southern Orange counties and natural gas service to San Diego County.
- *SoCalGas* is a natural gas distribution utility, serving customers throughout most of Southern California and part of central California.
- *Sempra Texas Utility* holds our investment in Oncor Holdings, which owns an 80.25-percent interest in Oncor, a regulated electric transmission and distribution utility serving customers in the north-central, eastern and western parts of Texas. As we discuss in Note 5, we completed our acquisition of the investment in March 2018.
- *Sempra South American Utilities* develops, owns and operates, or holds interests in, electric transmission, distribution and generation infrastructure in Chile and Peru. In January 2019, our board of directors approved a plan to sell our South American businesses. We expect to complete the sales process by the end of 2019.
- *Sempra Mexico* develops, owns and operates, or holds interests in, natural gas, electric, LNG, LPG, ethane and liquid fuels infrastructure, and has marketing operations for the purchase of LNG and the purchase and sale of natural gas in Mexico.
- *Sempra Renewables* develops, owns and operates, or holds interests in, wind and solar power generation facilities serving wholesale electricity markets in the U.S. As we discuss in Note 5, in June 2018, our board of directors approved a plan to market and sell all the segment's wind assets and investments and solar assets and investments. In December 2018, Sempra Renewables completed the sale of all its operating solar assets, solar and battery storage development projects and one wind generation facility. In February 2019, Sempra Renewables entered into an agreement to sell its remaining wind assets and investments. We expect to complete the sale in the second quarter of 2019.
- *Sempra LNG & Midstream* develops, owns and operates, or holds interests in, terminals for the import and export of LNG and sale of natural gas, and natural gas pipelines, storage facilities and marketing operations, all within the U.S. As we discuss in Note 5, in June 2018, our board of directors approved a plan to market and sell our natural gas storage assets at Mississippi Hub and our 90.9-percent ownership interest in Bay Gas. In February 2019, Sempra LNG & Midstream completed the sale of these assets.

We evaluate each segment's performance based on its contribution to Sempra Energy's reported earnings and cash flows. The California Utilities operate in essentially separate service territories, under separate regulatory frameworks and rate structures set by the CPUC. The California Utilities' operations are based on rates set by the CPUC and the FERC. We describe the accounting policies of all of our segments in Note 1.

The cost of common services shared by the business segments is assigned directly or allocated based on various cost factors, depending on the nature of the service provided. Interest income and expense is recorded on intercompany loans. The loan balances and related interest are eliminated in consolidation.

The following tables show selected information by segment from our Consolidated Statements of Operations and Consolidated Balance Sheets. We provide information about our equity method investments by segment in Note 6. Amounts labeled as "All other" in the following tables consist primarily of activities of parent organizations.

SEGMENT INFORMATION*(Dollars in millions)*

	Years ended December 31,		
	2018	2017	2016
REVENUES			
SDG&E	\$ 4,568	\$ 4,476	\$ 4,253
SoCalGas	3,962	3,785	3,471
Sempra South American Utilities	1,585	1,567	1,556
Sempra Mexico	1,376	1,196	725
Sempra Renewables	124	94	34
Sempra LNG & Midstream	472	540	508
Adjustments and eliminations	(3)	(1)	—
Intersegment revenues ⁽¹⁾	(397)	(450)	(364)
Total	\$ 11,687	\$ 11,207	\$ 10,183
INTEREST EXPENSE			
SDG&E	\$ 221	\$ 203	\$ 195
SoCalGas	115	102	97
Sempra South American Utilities	40	38	38
Sempra Mexico	120	97	13
Sempra Renewables	19	15	4
Sempra LNG & Midstream	21	39	43
All other	496	284	282
Intercompany eliminations	(107)	(119)	(119)
Total	\$ 925	\$ 659	\$ 553
INTEREST INCOME			
SDG&E	\$ 4	\$ —	\$ —
SoCalGas	2	1	1
Sempra South American Utilities	31	28	21
Sempra Mexico	65	23	6
Sempra Renewables	12	7	5
Sempra LNG & Midstream	49	56	71
All other	14	—	—
Intercompany eliminations	(73)	(69)	(78)
Total	\$ 104	\$ 46	\$ 26
DEPRECIATION AND AMORTIZATION			
SDG&E	\$ 688	\$ 670	\$ 646
SoCalGas	556	515	476
Sempra South American Utilities	58	54	49
Sempra Mexico	175	156	77
Sempra Renewables	27	38	6
Sempra LNG & Midstream	26	42	47
All other	19	15	11
Total	\$ 1,549	\$ 1,490	\$ 1,312
INCOME TAX EXPENSE (BENEFIT)			
SDG&E	\$ 173	\$ 155	\$ 280
SoCalGas	92	160	143
Sempra South American Utilities	95	80	80
Sempra Mexico	185	227	188
Sempra Renewables	71	(226)	(38)
Sempra LNG & Midstream	(435)	(119)	(80)
All other	(85)	999	(184)
Total	\$ 96	\$ 1,276	\$ 389

SEGMENT INFORMATION (CONTINUED)*(Dollars in millions)*

	Years ended December 31 or at December 31,		
	2018	2017	2016
EARNINGS (LOSSES) ATTRIBUTABLE TO COMMON SHARES			
SDG&E	\$ 669	\$ 407	\$ 570
SoCalGas ⁽²⁾	400	396	349
Sempra Texas Utility	371	—	—
Sempra South American Utilities	199	186	156
Sempra Mexico	237	169	463
Sempra Renewables	328	252	55
Sempra LNG & Midstream	(617)	150	(107)
All other ⁽²⁾	(663)	(1,304)	(116)
Total	\$ 924	\$ 256	\$ 1,370
EXPENDITURES FOR PROPERTY, PLANT & EQUIPMENT			
SDG&E	\$ 1,542	\$ 1,555	\$ 1,399
SoCalGas	1,538	1,367	1,319
Sempra South American Utilities	240	244	194
Sempra Mexico	368	248	330
Sempra Renewables	51	497	835
Sempra LNG & Midstream	31	20	117
All other	14	18	20
Total	\$ 3,784	\$ 3,949	\$ 4,214
ASSETS			
SDG&E	\$ 19,225	\$ 17,844	\$ 17,719
SoCalGas	15,389	14,159	13,424
Sempra Texas Utility	9,652	—	—
Sempra South American Utilities	4,107	4,060	3,591
Sempra Mexico	9,165	8,554	7,542
Sempra Renewables	2,549	2,898	3,644
Sempra LNG & Midstream	4,060	4,872	5,564
All other	731	915	475
Intersegment receivables	(4,240)	(2,848)	(4,173)
Total	\$ 60,638	\$ 50,454	\$ 47,786
GEOGRAPHIC INFORMATION			
Long-lived assets ⁽³⁾ :			
United States	\$ 40,611	\$ 31,487	\$ 28,351
Mexico	5,800	5,363	4,814
South America	2,374	2,180	1,863
Total	\$ 48,785	\$ 39,030	\$ 35,028
Revenues ⁽⁴⁾ :			
United States	\$ 8,840	\$ 8,547	\$ 8,004
South America	1,585	1,567	1,556
Mexico	1,262	1,093	623
Total	\$ 11,687	\$ 11,207	\$ 10,183

⁽¹⁾ Revenues for reportable segments include intersegment revenues of \$4 million, \$64 million, \$114 million and \$215 million for 2018, \$7 million, \$74 million, \$103 million, and \$266 million for 2017, and \$6 million, \$76 million, \$102 million and \$180 million for 2016 for SDG&E, SoCalGas, Sempra Mexico and Sempra LNG & Midstream, respectively.

⁽²⁾ After preferred dividends.

⁽³⁾ Includes net PP&E and investments.

⁽⁴⁾ Amounts are based on where the revenue originated, after intercompany eliminations.

NOTE 18. QUARTERLY FINANCIAL DATA (UNAUDITED)

We provide quarterly financial information for Sempra Energy Consolidated, SDG&E and SoCalGas below:

SEMPRA ENERGY		Quarters ended			
<i>(In millions, except per share amounts)</i>		March 31	June 30	September 30	December 31
2018:					
Revenues	\$	2,962	\$ 2,564	\$ 2,940	\$ 3,221
Expenses and other income	\$	2,295	\$ 3,673	\$ 2,513	\$ 2,160
Net income (loss)	\$	358	\$ (530)	\$ 334	\$ 964
Earnings (losses) attributable to common shares	\$	347	\$ (561)	\$ 274	\$ 864
Basic per-share amounts ⁽¹⁾ :					
Net income (loss)	\$	1.39	\$ (1.99)	\$ 1.22	\$ 3.51
Earnings (losses) attributable to common shares	\$	1.34	\$ (2.11)	\$ 1.00	\$ 3.15
Weighted-average common shares outstanding		257.9	265.8	273.9	274.3
Diluted per-share amounts ⁽¹⁾⁽²⁾ :					
Net income (loss)	\$	1.38	\$ (1.99)	\$ 1.21	\$ 3.25
Earnings (losses) attributable to common shares ⁽³⁾	\$	1.33	\$ (2.11)	\$ 0.99	\$ 3.03
Weighted-average common shares outstanding		259.5	265.8	275.9	296.4
2017:					
Revenues	\$	3,031	\$ 2,533	\$ 2,679	\$ 2,964
Expenses and other income ⁽⁴⁾	\$	2,279	\$ 2,136	\$ 2,674	\$ 2,567
Net income (loss)	\$	452	\$ 248	\$ 102	\$ (451)
Earnings (losses) attributable to common shares	\$	441	\$ 259	\$ 57	\$ (501)
Basic per-share amounts ⁽¹⁾ :					
Net income (loss)	\$	1.80	\$ 0.99	\$ 0.41	\$ (1.80)
Earnings (losses) attributable to common shares	\$	1.76	\$ 1.03	\$ 0.23	\$ (1.99)
Weighted-average common shares outstanding		251.1	251.4	251.7	251.9
Diluted per-share amounts ⁽¹⁾⁽²⁾ :					
Net income (loss)	\$	1.79	\$ 0.98	\$ 0.41	\$ (1.80)
Earnings (losses) attributable to common shares	\$	1.75	\$ 1.03	\$ 0.22	\$ (1.99)
Weighted-average common shares outstanding		252.2	252.8	253.4	251.9

⁽¹⁾ EPS is computed independently for each of the quarters and therefore may not sum to the total for the year.

⁽²⁾ In the quarters ended June 30, 2018 and December 31, 2017, the total weighted-average potentially dilutive securities were not included in the computation of losses per common share since to do so would have decreased the loss per share.

⁽³⁾ Due to the dilutive effect of the mandatory convertible preferred stock in the quarter ended December 31, 2018, the numerator used to calculate diluted EPS included an add-back of \$36 million of mandatory convertible preferred stock dividends declared in that quarter.

⁽⁴⁾ Amount reflects a reclassification of equity earnings to conform to current year presentation, which we discuss in Note 1.

In June 2018, we recorded impairment charges totaling \$1.5 billion (\$900 million after tax and NCI), which included \$1.3 billion (\$755 million after tax and NCI) at Sempra LNG & Midstream and \$200 million (\$145 million after tax) at Sempra Renewables. In December 2018, we reduced the impairment charge at Sempra LNG & Midstream by \$183 million (\$126 million after tax and NCI). We discuss the impairments in Notes 5 and 12. In December 2018, we completed the sale of our U.S. operating solar assets, solar and battery storage development projects, as well as an interest in one wind facility, and recognized a pretax gain on sale of \$513 million (\$367 million after tax). We discuss the sale and related gain in Note 5.

In September 2018, we impaired our remaining equity method investment in RBS Sempra Commodities by recording a charge of \$65 million in Equity Earnings. We discuss matters related to RBS Sempra Commodities further in Note 16.

In December 2017, Sempra Energy's income tax expense included \$870 million related to the impact of the TCJA, as we discuss in Note 8.

In September 2017, SDG&E recognized a charge of \$351 million (\$208 million after tax) for the write-off of its wildfire regulatory asset, which we discuss in Note 16.

In June 2017, Sempra Mexico recognized an impairment charge of \$71 million (\$47 million after NCI) related to assets that were previously held for sale at TdM. We discuss the impairment in Notes 5 and 12.

SDG&E (Dollars in millions)				
	Quarters ended			
	March 31	June 30	September 30	December 31
2018:				
Operating revenues	\$ 1,055	\$ 1,051	\$ 1,299	\$ 1,163
Operating expenses	807	836	999	916
Operating income	<u>\$ 248</u>	<u>\$ 215</u>	<u>\$ 300</u>	<u>\$ 247</u>
Net income	\$ 169	\$ 146	\$ 216	\$ 145
Losses (earnings) attributable to noncontrolling interest	1	—	(11)	3
Earnings attributable to common shares	<u>\$ 170</u>	<u>\$ 146</u>	<u>\$ 205</u>	<u>\$ 148</u>
2017:				
Operating revenues	\$ 1,057	\$ 1,058	\$ 1,236	\$ 1,125
Operating expenses ⁽¹⁾	783	821	1,294	869
Operating income (loss) ⁽¹⁾	<u>\$ 274</u>	<u>\$ 237</u>	<u>\$ (58)</u>	<u>\$ 256</u>
Net income (loss)	\$ 157	\$ 153	\$ (19)	\$ 130
(Earnings) losses attributable to noncontrolling interest	(2)	(4)	(9)	1
Earnings (losses) attributable to common shares	<u>\$ 155</u>	<u>\$ 149</u>	<u>\$ (28)</u>	<u>\$ 131</u>

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

SOCALGAS (Dollars in millions)				
	Quarters ended			
	March 31	June 30	September 30	December 31
2018:				
Operating revenues	\$ 1,126	\$ 772	\$ 802	\$ 1,262
Operating expenses	848	703	797	1,023
Operating income	<u>\$ 278</u>	<u>\$ 69</u>	<u>\$ 5</u>	<u>\$ 239</u>
Net income (loss)	\$ 225	\$ 34	\$ (14)	\$ 156
Dividends on preferred stock	—	(1)	—	—
Earnings (losses) attributable to common shares	<u>\$ 225</u>	<u>\$ 33</u>	<u>\$ (14)</u>	<u>\$ 156</u>
2017:				
Operating revenues	\$ 1,241	\$ 770	\$ 684	\$ 1,090
Operating expenses ⁽¹⁾	929	690	679	860
Operating income ⁽¹⁾	<u>\$ 312</u>	<u>\$ 80</u>	<u>\$ 5</u>	<u>\$ 230</u>
Net income	\$ 203	\$ 59	\$ 7	\$ 128
Dividends on preferred stock	—	(1)	—	—
Earnings attributable to common shares	<u>\$ 203</u>	<u>\$ 58</u>	<u>\$ 7</u>	<u>\$ 128</u>

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

SoCalGas recognizes annual authorized revenue for core natural gas customers using seasonal factors established in the Triennial Cost Allocation Proceeding. Accordingly, a significant portion of SoCalGas' annual earnings are recognized in the first and fourth quarters each year.

SCHEDULE I – SEMPRA ENERGY
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Condensed Statements of Comprehensive Income (Loss) for the years ended December 31, 2018, 2017 and 2016	S-3
Condensed Balance Sheets at December 31, 2018 and 2017	S-4
Condensed Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016	S-5
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SEMPRA ENERGY
CONDENSED STATEMENTS OF OPERATIONS

(Dollars in millions, except per share amounts)

	Years ended December 31,		
	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Interest income	\$ 14	\$ —	\$ —
Interest expense	(495)	(293)	(277)
Operating expenses	(82)	(80)	(76)
Other (expense) income, net	(16)	100	(7)
Income tax benefit	154	33	181
Loss before equity in earnings of subsidiaries	(425)	(240)	(179)
Equity in earnings of subsidiaries, net of income taxes	1,474	496	1,549
Net income	1,049	256	1,370
Mandatory convertible preferred stock dividends	(125)	—	—
Earnings	\$ 924	\$ 256	\$ 1,370
Basic earnings per common share	\$ 3.45	\$ 1.02	\$ 5.48
Weighted-average shares outstanding, basic (thousands)	268,072	251,545	250,217
Diluted earnings per common share	\$ 3.42	\$ 1.01	\$ 5.46
Weighted-average shares outstanding, diluted (thousands)	269,852	252,300	251,155

⁽¹⁾ As adjusted for the retrospective adoption of ASU 2017-07, which we discuss in Note 2.

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Years ended December 31, 2018, 2017 and 2016		
	Pretax amount	Income tax benefit (expense)	Net-of-tax amount
2018:			
Net income	\$ 895	\$ 154	\$ 1,049
Other comprehensive income (loss):			
Foreign currency translation adjustments	(144)	—	(144)
Financial instruments	64	(21)	43
Pension and other postretirement benefits	(38)	4	(34)
Total other comprehensive loss	(118)	(17)	(135)
Comprehensive income	\$ 777	\$ 137	\$ 914
2017:			
Net income	\$ 223	\$ 33	\$ 256
Other comprehensive income (loss):			
Foreign currency translation adjustments	107	—	107
Financial instruments	2	1	3
Pension and other postretirement benefits	20	(8)	12
Total other comprehensive income	129	(7)	122
Comprehensive income	\$ 352	\$ 26	\$ 378
2016:			
Net income	\$ 1,189	\$ 181	\$ 1,370
Other comprehensive income (loss):			
Foreign currency translation adjustments	42	—	42
Financial instruments	(6)	11	5
Pension and other postretirement benefits	(13)	4	(9)
Total other comprehensive income	23	15	38
Comprehensive income	\$ 1,212	\$ 196	\$ 1,408

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED BALANCE SHEETS

(Dollars in millions)

	December 31, 2018	December 31, 2017
Assets:		
Cash and cash equivalents	\$ 14	\$ 104
Due from affiliates	93	83
Income taxes receivable	397	272
Other current assets	9	6
Total current assets	<u>513</u>	<u>465</u>
Investments in subsidiaries	28,778	17,924
Due from affiliates	3	2
Deferred income taxes	1,554	1,802
Other assets	572	656
Total assets	<u>\$ 31,420</u>	<u>\$ 20,849</u>
Liabilities and shareholders' equity:		
Current portion of long-term debt	\$ 1,498	\$ 500
Due to affiliates	287	280
Other current liabilities	527	396
Total current liabilities	<u>2,312</u>	<u>1,176</u>
Long-term debt	9,647	6,198
Due to affiliates	1,812	300
Other long-term liabilities	511	505
Commitments and contingencies (Note 4)		
Shareholders' equity	17,138	12,670
Total liabilities and shareholders' equity	<u>\$ 31,420</u>	<u>\$ 20,849</u>

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2018	2017	2016
Net cash provided by (used in) operating activities	\$ 213	\$ 89	\$ (3)
Expenditures for property, plant and equipment	(11)	(11)	(5)
Expenditures for acquisition	(329)	—	—
Capital contributions to investees	(9,457)	—	—
(Increase) decrease in loans to affiliates, net	(1)	—	457
Expenditures for Merger-related costs	—	(12)	—
Net cash (used in) provided by investing activities	(9,798)	(23)	452
Common stock dividends paid	(877)	(755)	(686)
Preferred dividends paid	(89)	—	—
Issuances of mandatory convertible preferred stock, net of \$42 in offering costs in 2018	2,258	—	—
Issuances of common stock, net of \$41 in offering costs in 2018	2,272	47	51
Repurchases of common stock	(21)	(15)	(56)
Issuances of long-term debt	4,969	1,595	499
Payments on long-term debt	(500)	(600)	(750)
Increase (decrease) in loans from affiliates, net	1,520	(239)	504
Debt issuance costs	(37)	(7)	(3)
Net cash provided by (used in) financing activities	9,495	26	(441)
(Decrease) increase in cash and cash equivalents	(90)	92	8
Cash and cash equivalents, January 1	104	12	4
Cash and cash equivalents, December 31	\$ 14	\$ 104	\$ 12
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES			
Accrued Merger-related transaction costs	\$ —	\$ 31	\$ —
Preferred dividends declared but not paid	36	—	—
Common dividends issued in stock	54	53	53
Common dividends declared but not paid	245	207	189

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY

NOTES TO CONDENSED FINANCIAL INFORMATION OF PARENT

NOTE 1. BASIS OF PRESENTATION

The condensed financial information of Sempra Energy has been prepared in accordance with SEC Regulation S-X Rule 5-04 and Rule 12-04. We apply the same accounting policies as in the financial statements of Sempra Energy Consolidated, except that Sempra Energy accounts for the earnings of its subsidiaries under the equity method in this unconsolidated financial information.

Other Income, Net, on the Condensed Statements of Operations includes:

- \$(6) million, \$56 million and \$23 million of (losses) gains on dedicated assets in support of our executive retirement and deferred compensation plans in 2018, 2017 and 2016, respectively; and
- \$3 million, \$50 million and \$(28) million net gains (losses) primarily from the settlement of foreign currency derivatives to hedge Sempra Mexico parent's exposure to movements in the Mexican peso from its controlling interest in IEnova in 2018, 2017 and 2016, respectively.

Additional information on Sempra Energy's foreign currency derivatives is provided in Note 11 of the Notes to Consolidated Financial Statements.

NOTE 2. NEW ACCOUNTING STANDARDS

We describe below and in Note 2 of the Notes to Consolidated Financial Statements recent pronouncements that have had a significant effect on Sempra Energy's financial condition, results of operations, cash flows or disclosures. Additional information on ASU 2018-05 and ASU 2018-14, which may also have a significant effect on Sempra Energy's financial condition, results of operation, cash flows or disclosures, is provided in Note 2 of the Notes to Consolidated Financial Statements.

ASU 2016-02, "Leases," ASU 2018-10, "Codification Improvements to Topic 842, Leases" and ASU 2018-11, "Leases (Topic 842): Targeted Improvements" (collectively referred to as the "lease standard"): We will adopt the lease standard on January 1, 2019 using the optional transition method to apply the new guidance prospectively as of January 1, 2019, rather than as of the earliest period presented. The adoption of the lease standard will have a material impact on our balance sheet at January 1, 2019 due to the initial recognition of ROU assets and lease liabilities for operating leases.

The following table shows the expected increase (decrease) from adoption of the lease standard on our balance sheet at January 1, 2019.

EXPECTED IMPACT FROM ADOPTION OF THE LEASE STANDARD		
<i>(Dollars in millions)</i>		
Right-of-use assets – operating leases	\$	191
Deferred income taxes		(3)
Property, plant and equipment, net ⁽¹⁾		(147)
Other current liabilities		3
Long-term debt		(138)
Other long-term liabilities		159
Retained earnings ⁽²⁾		17

⁽¹⁾ Included in Other Assets.

⁽²⁾ Included in Shareholders' Equity.

As a result of the adoption of the lease standard, we will derecognize our corporate headquarters building lease in accordance with the transition provisions for build-to-suit arrangements. On a prospective basis, we will account for the corporate headquarters building lease as an operating lease. The expected impact is included in the above table.

ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost": We adopted the standard on January 1, 2018 and elected the practical expedient available under the transition guidance. Upon adoption of ASU 2017-07, our Condensed Statements of Operations were impacted as follows:

IMPACT FROM ADOPTION OF ASU 2017-07*(Dollars in millions)*

Years ended December 31,

	Years ended December 31,					
	2017			2016		
	As previously reported	Effect of adoption	As adjusted	As previously reported	Effect of adoption	As adjusted
Sempra Energy:						
Operation and maintenance	\$ (87)	\$ 7	\$ (80)	\$ (81)	\$ 5	\$ (76)
Other income (expense), net	107	(7)	100	(2)	(5)	(7)

ASU 2018-02, “Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income”: We will adopt ASU 2018-02 on January 1, 2019 and will reclassify the income tax effects of the TCJA from AOCI to retained earnings. We expect the impact from adoption of ASU 2018-02 on January 1, 2019 to be an increase of \$14 million to beginning Retained Earnings and Accumulated Other Comprehensive Loss.

NOTE 3. LONG-TERM DEBT

The following table shows the detail and maturities of long-term debt outstanding:

LONG-TERM DEBT*(Dollars in millions)*

	December 31,	
	2018	2017
6.15% Notes June 15, 2018	\$ —	\$ 500
9.8% Notes February 15, 2019	500	500
Notes at variable rates (2.69% at December 31, 2018) July 15, 2019	500	—
1.625% Notes October 7, 2019	500	500
2.4% Notes February 1, 2020	500	—
2.4% Notes March 15, 2020	500	500
2.85% Notes November 15, 2020	400	400
Notes at variable rates (2.94% at December 31, 2018) January 15, 2021 ⁽¹⁾	700	—
Notes at variable rates (3.24% at December 31, 2018) March 15, 2021	850	850
2.875% Notes October 1, 2022	500	500
2.9% Notes February 1, 2023	500	—
4.05% Notes December 1, 2023	500	500
3.55% Notes June 15, 2024	500	500
3.75% Notes November 15, 2025	350	350
3.25% Notes June 15, 2027	750	750
3.4% Notes February 1, 2028	1,000	—
3.8% Notes February 1, 2038	1,000	—
6% Notes October 15, 2039	750	750
4% Notes February 1, 2048	800	—
Fair value adjustments for interest rate swaps, net	—	(1)
Build-to-suit lease	138	138
	<u>11,238</u>	<u>6,737</u>
Current portion of long-term debt	(1,498)	(500)
Unamortized discount on long-term debt	(38)	(13)
Unamortized debt issuance costs	(55)	(26)
Total long-term debt	<u>\$ 9,647</u>	<u>\$ 6,198</u>

⁽¹⁾ *Callable long-term debt not subject to make-whole provisions.*

Excluding the build-to-suit lease and market value adjustments for interest rate swaps, maturities of long-term debt are \$1.5 billion in 2019, \$1.4 billion in 2020, \$1.5 billion in 2021, \$500 million in 2022, \$1 billion in 2023 and \$5.2 billion thereafter.

Additional information on Sempra Energy's long-term debt is provided in Note 7 of the Notes to Consolidated Financial Statements.

NOTE 4. COMMITMENTS AND CONTINGENCIES

For contingencies and guarantees related to Sempra Energy, refer to Notes 5, 6 and 16 of the Notes to Consolidated Financial Statements.

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BOARD OF DIRECTORS

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Sempra Energy, San Diego, California

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Partner, Manatt, Phelps & Phillips, LLP,
Former California State Treasurer,
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Chief Executive Officer, Grupo Aeromexico,
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Managing Partner, Contreras-Sweet Enterprises
and Rockway Equity Partners, and Former
Administrator of the U.S. Small Business
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Magellan Midstream Partners LP, Tulsa, Oklahoma

William G. Ouchi, Ph.D.

Former Sanford and Betty Sigoloff Distinguished
Professor, UCLA, Los Angeles, California

William C. Rusnack

Former President and Chief Executive Officer,
Premcor Inc., Marina Del Rey, California

Lynn Schenk

Attorney in private practice and
Former Member, U.S. House of Representatives,
San Diego, California

Jack T. Taylor

Former Chief Operating Officer-Americas and
Executive Vice Chair of U.S. Operations, KPMG LLP,
Shreveport, Louisiana

Cynthia L. Walker

Senior Vice President, Midstream and Marketing,
Occidental Petroleum Corp., Houston, Texas

James C. Yardley

Former President and Chief Executive Officer,
El Paso Pipeline GP Company LLC,
Houston, Texas

SENIOR MANAGEMENT TEAM

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Chairman and Chief Executive Officer

Joseph A. Householder

President and Chief Operating Officer

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Executive Vice President and Group President

Trevor I. Mihalik*

Executive Vice President and
Chief Financial Officer

Patricia K. Wagner*

Group President—U.S. Utilities

Lisa M. Alexander

Vice President—Corporate Communications and
Sustainability

Maryam S. Brown

Vice President—Federal Government Affairs

Lisa Glatch

Strategic Initiatives Officer

Erbin B. Keith

Chief Regulatory Officer and Special Counsel

Faisal H. Khan

Vice President—Investor Relations

Sandeep K. Mor

Vice President—Mergers and Acquisitions

G. Joyce Rowland

Senior Vice President and Chief Culture Officer

Karen L. Sedgwick

Vice President and Treasurer

Emily C. Shults

Vice President—Audit Services

Peter R. Wall

Vice President, Controller and
Chief Accounting Officer

Paul H. Yong

Vice President—Corporate Tax and
Chief Tax Counsel

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Chairman and Chief Executive Officer

Scott D. Drury

President

Caroline A. Winn

Chief Operating Officer

P. Kevin Chase**

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and Chief Digital Officer

Randall L. Clark

Chief Human Resources Officer and
Chief Administrative Officer

Scott B. Crider

Vice President—Customer Services

Diana L. Day

Vice President and General Counsel

Estela de Llanos**

Vice President, Operations Support, Sustainability
and Chief Environmental Officer

Bruce A. Folkmann**

Vice President, Controller, Chief Financial Officer
and Chief Accounting Officer

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Senior Vice President—Electric Operations

Benjamin W. Gordon**

Vice President—Technology Operations and
Infrastructure Management

Kendall K. Helm

Vice President—Energy Supply

John D. Jenkins

Vice President—Electric Operations and
Major Construction

Eugene W. Mitchell**

Vice President—State Government Affairs and
External Affairs

Michael M. Schneider

Vice President—Clean Transportation and
Asset Management

Daniel F. Skopec**

Vice President—Regulatory Affairs

Katherine M. Speirs

Vice President—Electric System Operations

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Jimmie I. Cho

Chief Operating Officer

David J. Barrett

Vice President and General Counsel

David L. Buczkowski**

Vice President—Gas Engineering and
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Maria Angelica Espinosa**

Vice President and Chief Risk Officer

Paul M. Goldstein

Vice President—Customer Services

Sandra K. Hrna

Vice President—Accounting and Finance

Jawaad A. Malik

Vice President—Gas Acquisition

Neil P. Navin**

Vice President—Gas Transmission and Storage

Guillermina Orozco-Mejia**

Vice President—Gas Distribution

Rodger R. Schwecke**

Senior Vice President—Gas Operations and
Construction

Sharon L. Tomkins

Vice President—Customer Solutions and Strategy

Denita A. Willoughby**

Vice President—Supply Management

Cedric L. Williams**

Vice President—Construction

Gillian A. Wright

Chief Human Resources Officer and
Chief Administrative Officer

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Mile Cacic

Chief Executive Officer, Luz del Sur, S.A.

Francisco Mualim

Chief Executive Officer, Chilquinta Energía, S.A.

SEMPRA NORTH AMERICAN INFRASTRUCTURE

Carlos Ruiz

President and Chief Executive Officer

Justin C. Bird

Chief Development Officer

Robert J. Borthwick

General Manager, Sempra Renewables

Amy H. Chiu

Chief Asset Management Officer

E. Scott Chrisman

Chief Commercial Officer, Sempra LNG & Midstream

Kathryn J. Collier

Chief Financial Officer and
Chief Administrative Officer

Glen A. Donovan

Vice President—Project Development and Structuring

Martin S. Hupka

Vice President and General Counsel

Patrick T. Lee

Vice President—Infrastructure and Technology

Ryan D. O'Neal

Vice President—Midstream,
Sempra LNG & Midstream

Octávio M. Simões

President and Chief Executive Officer,
Sempra LNG & Midstream

Michael A. Sliwowski

Vice President—Business Origination,
Sempra LNG & Midstream

SEMPRA MEXICO

Tania Ortiz

Chief Executive Officer,
Infraestructura Energética Nova, S.A.B. de CV.

* These individuals are directors of Southern California
Gas Company.

** These individuals are officers of San Diego Gas &
Electric and Southern California Gas Company.

Corporate Information

Transfer Agent

American Stock Transfer & Trust Company, LLC
Attn: Sempra Energy
6201 15th Avenue
Brooklyn, NY 11219
Telephone: 877-773-6772
Email: help@astfinancial.com
Hearing Impaired (TTY):
866-703-9077 or 718-921-8386
Internet: www.astfinancial.com

Shareholder Services

Investors with general questions regarding Sempra Energy or Southern California Gas Company securities should contact the company at:

Sempra Energy
Shareholder Services
488 8th Avenue
San Diego, CA 92101
Telephone: 877-736-7727
Email: investor@sempra.com
Internet: Sempra.com

News and Information

Sempra Energy's Annual Report on Form 10-K filed with the Securities and Exchange Commission is available to shareholders at no charge by writing to Shareholder Services. This information, as well as our corporate governance guidelines, Board of Directors and Senior Officer Code of Conduct and standing board committee charters, are also available on the company's website at Sempra.com.

Investor Relations

Security analysts, portfolio managers and other members of the financial community should contact:

Patrick S. Billings
Director - Investor Relations
Telephone: 619-696-2901

Stock Exchange Listings

Sempra Energy Common Stock:
Ticker Symbol: SRE
New York Stock Exchange

Sempra Energy Preferred Stocks:
Ticker Symbol: SREPA
New York Stock Exchange

Ticker Symbol: SREPRB
New York Stock Exchange

Direct Common Stock Investment Plan

Sempra Energy offers a Direct Common Stock Investment Plan as a simple, convenient and affordable way to invest in the company. Cash dividends from a participant's account can be reinvested automatically in full or in part (but not less than 10 percent of each dividend) to purchase additional shares, or participants may choose to receive all or a portion of their cash dividends electronically or by check. Participation in the plan requires an initial investment of as little as \$500. The plan allows additional cash investments of a minimum of \$25 up to a maximum of \$150,000 per calendar year. Brokerage commissions incurred in the purchase of shares will be paid by Sempra Energy. The plan is offered only by the means of a prospectus, which can be obtained by calling the plan administrator, American Stock Transfer & Trust Company, LLC, at 877-773-6772, or through the Internet at www.astfinancial.com.

Sempra Energy's Annual Report on Form 10-K filed with the Securities and Exchange Commission, which includes as exhibits the certifications filed by Sempra Energy's chief executive officer and chief financial officer under the Sarbanes-Oxley Act of 2002, is available to shareholders at no charge by writing to the company's Shareholder Services Department.

Information Regarding Forward-Looking Statements

We make statements in this report that are not historical fact and constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on assumptions with respect to the future, involve risks and uncertainties, and are not guarantees of performance. Future results may differ materially from those expressed in the forward-looking statements. These forward-looking statements represent our estimates and assumptions only as of the filing date of our 2018 Annual Report on Form 10-K. We assume no obligation to update or revise any forward-looking statement as a result of new information, future events or other factors.

In this report, when we use words such as "believes," "expects," "anticipates," "plans," "estimates," "projects," "forecasts," "contemplates," "assumes," "depends," "should," "could," "would," "will," "confident," "may," "can," "potential," "possible," "proposed," "target," "pursue," "outlook," "maintain," or similar expressions, or when we discuss our guidance, strategy, plans, goals, vision, opportunities, projections, initiatives, objectives or intentions, we are making forward-looking statements.

Factors, among others, that could cause our actual results and future actions to differ materially from those described in any forward-looking statements include risks and uncertainties relating to: the greater degree and prevalence of wildfires in California in recent years and the risk that we may be found liable for damages regardless of fault, such as where inverse condemnation applies, and risk that we may not be able to recover any such costs in rates from customers in California; actions and the timing of actions, including decisions, new regulations and issuances of authorizations by the California Public Utilities Commission, U.S. Department of Energy, California Department of Conservation's Division of Oil, Gas, and Geothermal Resources, Los Angeles County Department of Public Health, U.S. Environmental Protection Agency, Federal Energy Regulatory Commission, Pipeline and Hazardous Materials Safety Administration, Public Utility Commission of Texas, states, cities and counties, and other regulatory and governmental bodies in the U.S. and other countries in which we operate; actions by credit rating agencies to downgrade our credit ratings or those of our subsidiaries or to place those ratings on negative outlook and our ability to borrow at favorable interest rates; the success of business development efforts, construction projects, major acquisitions, divestitures and internal structural changes, including risks in (i) obtaining or maintaining authorizations; (ii) completing construction projects on schedule and budget; (iii) obtaining the consent of partners; (iv) counterparties' ability to fulfill contractual commitments; (v) winning competitively bid infrastructure projects; (vi) disruption caused by the announcement of contemplated acquisitions and/or divestitures or internal structural changes; (vii) the ability to complete contemplated acquisitions and/or divestitures; and (viii) the ability to realize anticipated benefits from any of these efforts once completed; the resolution of civil and criminal litigation and regulatory investigations and proceedings; deviations from regulatory precedent or practice that result in a reallocation of benefits or burdens among shareholders and ratepayers; denial of approvals of proposed settlements; delays in, or denial of, regulatory agency authorizations to recover costs in rates from customers or regulatory agency approval for projects required to enhance safety and reliability; and moves to reduce or eliminate reliance on natural gas; the availability of electric power and natural gas and natural gas storage capacity, including disruptions caused by failures in the transmission grid, limitations on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures; risks posed by actions of third parties who control the operations of our investments; weather conditions, natural disasters, accidents, equipment failures, computer system outages, explosions, terrorist attacks and other events that disrupt our operations, damage our facilities and systems, cause the release of harmful materials, cause fires and subject us to third-party liability for property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), may be disputed by insurers or may otherwise not be recoverable through regulatory mechanisms or may impact our ability to obtain satisfactory levels of affordable insurance; cybersecurity threats to the energy grid, storage and pipeline infrastructure, the information and systems used to operate our businesses and the confidentiality of our proprietary information and the personal information of our customers and employees; actions of activist shareholders, which could impact the market price of our securities and disrupt our operations as a result of, among other things, requiring significant time by management and our board of directors; changes in capital markets, energy markets and economic conditions, including the availability of credit; and volatility in currency exchange, interest and inflation rates and commodity prices and our ability to effectively hedge the risk of such volatility; the impact of recent federal tax reform and our ability to mitigate adverse impacts; changes in foreign and domestic trade policies and laws, including border tariffs and revisions to or replacement of international trade agreements, such as the North American Free Trade Agreement, that may increase our costs or impair our ability to resolve trade disputes; expropriation of assets by foreign governments and title and other property disputes; the impact at San Diego Gas & Electric Company (SDG&E) on competitive customer rates and reliability of electric transmission and distribution systems due to the growth in distributed and local power generation and from possible departing retail load resulting from customers transferring to Direct Access and Community Choice Aggregation or other forms of distributed and local power generation and the potential risk of nonrecovery for stranded assets and contractual obligations; Oncor Electric Delivery Company LLC's (Oncor) ability to eliminate or reduce its quarterly dividends due to regulatory capital requirements and other regulatory and governance commitments, including the determination by a majority of Oncor's independent directors or a minority member director to retain such amounts to meet future requirements; and other uncertainties, some of which may be difficult to predict and are beyond our control.

We caution you not to rely unduly on any forward-looking statements. You should review and consider carefully the risks, uncertainties and other factors that affect our business as described herein and in other reports that we file with the Securities and Exchange Commission.



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