



BALANCED GROWTH

2016 ANNUAL REPORT



ABOUT SEMPRA

Sempra Energy,[®] based in San Diego, is a Fortune 500 energy services holding company with 2016 revenues of more than \$10 billion. The Sempra Energy companies' more than 16,000 employees serve approximately 32 million consumers worldwide.

Sempra Utilities

Southern California Gas Company

SoCalGas has the largest customer base of any U.S. natural gas distribution utility, providing safe, reliable and affordable service to 21.7 million consumers.

San Diego Gas & Electric

SDG&E is an electric and natural gas utility that provides safe, reliable and clean energy to 3.6 million consumers in San Diego and southern Orange Counties.

Sempra South American Utilities

The Sempra South American Utilities are Chilquinta Energía in Chile and Luz del Sur in Peru. Sempra South American Utilities invest in electric generation and transmission to provide energy service to more than 6.9 million consumers.

Sempra Infrastructure

Sempra Mexico

Sempra Mexico includes IEnova, one of the largest private energy companies in Mexico. IEnova develops, builds, operates and invests in energy infrastructure in Mexico.

Sempra LNG & Midstream

Sempra LNG & Midstream develops, builds and invests in liquefied natural gas facilities and natural gas pipelines and storage.

Sempra Renewables

Sempra Renewables is a leading U.S. developer of renewable energy. Together with its partners, the company owns, operates and has under development nearly 2,400 megawatts of renewable capacity.

FELLOW SHAREHOLDERS:

One of our core strengths is our balanced portfolio of growth businesses – regulated utilities and long-term contracted energy infrastructure – that continue to perform well in a variety of market conditions. Over time, we believe that this portfolio approach allows us to benefit from multiple growth platforms, maximizing shareholder return and improving the execution of our financial plan.

Our California utilities, Southern California Gas Co. (SoCalGas) and San Diego Gas & Electric (SDG&E), are the foundation of our portfolio. We also have ownership in strong-performing electric utilities in Chile and Peru, and in one of the largest and fastest-growing private energy companies in Mexico. We have an expanding base of valuable contracted infrastructure assets and investments, most of which are under contract for 20 years or longer, including Cameron LNG, our Energía Costa Azul regasification terminal, and natural gas pipelines and storage facilities, as well as renewable energy plants.

Several market trends are supporting growth in our businesses:

- Increasing investment in utility safety and reliability, due to aging infrastructure worldwide;
- Electric grid modernization fueled by new technology, development of distributed generation and an influx of renewable energy resources;
- Electrification of the transportation sector to reduce carbon emissions;
- Increasing demand for liquefied natural gas (LNG), resulting in a global natural gas market; and
- Growing energy demand in Latin America, creating the need for new energy infrastructure.



DEBRA L. REED
Chairman, President and
Chief Executive Officer



Over the next five years, Sempra Energy expects to designate a majority of its capital investment plan to reinforcing infrastructure and enhancing system safety and reliability for its California utilities.

112%
Sempra Energy
total shareholder
return 2011-2016*

Executing on Our Strategy

Our strategic objective is to grow our earnings per share and dividend over the next five years at roughly double the rate of the utility industry average, while maintaining a risk profile similar to our utility peers. We are on track to achieve this, while also strengthening our balance sheet and retaining the financial flexibility to invest in additional growth opportunities beyond this period.

In 2016, we achieved our key financial and operational targets and executed well on our strategic plan, positioning ourselves for continued strong performance in 2017. Our 2016 earnings were \$1.37 billion, or \$5.46 per diluted share. On an adjusted basis, our 2016 earnings were \$1.27 billion, or \$5.05 per diluted share.

Our strategy has created long-term value for our shareholders. Over the past five years,* our total shareholder return was 112 percent, compared with 64 percent for the Standard & Poor's 500 Utilities Index and 98 percent for the Standard & Poor's 500 Index. During this same period, we increased our dividend by almost 60 percent, nearly doubled our market capitalization to approximately \$25 billion and advanced several major projects in our utilities and infrastructure businesses. In February 2017, our board of directors approved raising our dividend by 9 percent to \$3.29 on an annualized basis.

We recently implemented organizational changes to advance leadership development and increase alignment with our strategic plan. We reorganized our subsidiaries under two new operating groups. The Sempra Utilities group includes our utility operations: SoCalGas, SDG&E and Sempra South American Utilities. The Sempra Infrastructure group includes our energy infrastructure development activities, investments and operations: Sempra Mexico, Sempra LNG & Midstream and Sempra Renewables.

We also rotated many of our senior executives into new roles throughout the company. I believe this rotation helps our senior executives gain a "horizontal" perspective on the organization. As our executives manage different functions, they develop a deeper understanding of the different aspects of our businesses and are able to assume greater responsibility within the company.

*12/31/2011 through 12/31/2016

Investments in Safety and Reliability

Over the next five years, we expect to earmark the majority of our capital investment plan for our California utilities, with a primary focus on safety, reliability and support of California's energy and environmental initiatives.

Among the largest safety and reliability projects for SoCalGas and SDG&E is the Pipeline Safety Enhancement Plan. In 2011, the California Public Utilities Commission (CPUC) directed natural gas transmission operators in the state to develop an implementation plan to test or replace all transmission pipelines that have not been pressure-tested. Collectively, SoCalGas and SDG&E operate more than 115,000 miles of natural gas pipelines and have more than 90 active or completed Pipeline Safety Enhancement Plan projects.

As this report went to press, SoCalGas was continuing to work with regulators to resume operations at its Aliso Canyon natural gas storage facility following the natural gas leak. Over the past year, SoCalGas has resolved a number of key issues since successfully sealing the leaking well in February 2016. The Los Angeles County Department of Public Health completed indoor and outdoor testing, which facilitated relocated local residents returning to their homes last summer. Additionally, SoCalGas has entered into two settlement agreements with governmental agencies for claims related to the leak, including with the South Coast Air Quality Management District.

SoCalGas has dedicated considerable effort to strengthening the infrastructure at Aliso Canyon and, in November 2016, filed with regulators for approval to resume natural gas injections at the field. Aliso Canyon remains an important energy supply hub for Southern California to meet peak electric generation demand in the summer and peak natural gas heating demand in the winter.

SDG&E's electric safety and reliability projects include upgrading or adding new transmission facilities in San Diego and southern Orange County, as well as in the Cleveland National Forest. Additionally, in 2016, the utility received regulatory approval to own and operate two energy storage projects totaling 37.5 megawatts (MW). Battery storage is the latest technology to improve overall reliability of the electric grid, accommodate more renewable energy and ease grid congestion.



In 2016, SDG&E received regulatory approval to build up to 3,500 electric vehicle charging units over the next 3 years.

Sempra Energy's utilities serve

10.5 million
electric consumers and
25.4 million
natural gas consumers



Sempra Renewables and its partners placed into service more than 420 MW of new wind and solar generating capacity in 2016.

Enova executed the largest follow-on equity offering in Mexico in the last two years
\$1.6 billion

Clean Energy Initiatives

SDG&E and SoCalGas have been clean energy leaders in California and the nation. SDG&E already has secured more than 40 percent of its power resources from renewable energy and is well ahead of schedule to meet the state's renewable energy mandate of 50 percent by 2030.

SDG&E is supporting a statewide initiative to put 1.5 million electric vehicles on California's roads by 2025. In early 2016, SDG&E gained regulatory approval for a pilot program to build and own up to 3,500 electric vehicle charging units over the next three years. SDG&E has since filed with regulators to expand the program to 90,000 homes, as well as public locations.

For its part, SoCalGas is concentrating on building infrastructure to accelerate the conversion from diesel fuel to natural gas in the heavy-duty transportation sector, especially with trucks and other vehicles moving freight at Southern California's ports and harbors. Additionally, SoCalGas is working with others to capture methane from dairies and landfills to convert into renewable natural gas that can be used in the pipeline system.

As demand for renewable energy expands nationwide, Sempra Renewables has positioned itself as one of the largest renewable energy developers in the U.S. With its joint-venture partners, Sempra Renewables now has invested in 19 solar and wind projects across 11 states with a total generating capacity of nearly 2,400 MW. All of these projects have long-term contracts for their output.

Meeting Global Demand for Energy, New Infrastructure

Rising global market demand for clean-burning natural gas – especially industry forecasts for post-2020 – has raised the profile of LNG. Advanced drilling techniques have enabled previously hard-to-access U.S. reserves of oil and natural gas to be extracted from shale rock in 21 states. Thanks to this technology, the U.S. has a projected abundant 100-year supply of natural gas that can be tapped for sale to global markets at a competitive price. Our Cameron LNG joint-venture facility under construction in Louisiana is expected to be one of the first U.S. liquefaction-export projects to commence operations in 2018. The \$10 billion project is fully contracted for 20 years, featuring three liquefaction facilities, or "trains," capable of processing and exporting up to 1.7 billion cubic feet of natural gas per day for Asia, Europe and other international markets.

We are actively pursuing additional potential U.S. LNG export development opportunities, including expanding the Cameron LNG facility and building a new export facility in Port Arthur, Texas.

Another promising growth avenue for us is in Mexico, Chile and Peru, where there is a need for new energy infrastructure to support increasing customer growth and energy demand.

With Mexico opening up its energy market to private investment, our IEnova operating unit continues to expand its footprint. In 2016, IEnova raised (U.S.) \$1.6 billion in an equity offering, primarily to finance recent acquisitions, decreasing Sempra Energy's ownership in IEnova to 66.4 percent. In September, IEnova completed the acquisition of PEMEX's 50-percent share in the Gasoductos de Chihuahua joint venture. The acquired assets now wholly owned by IEnova include three natural gas pipelines and an ethane pipeline, as well as a liquid petroleum gas pipeline and associated storage terminal. Also in 2016, IEnova acquired Mexico's largest wind power complex, the 252-MW Ventika facility in northern Mexico, and won a government bid to develop two solar energy projects totaling 141 MW. Additionally, IEnova, together with TransCanada Corporation, won a government bid to develop an estimated \$2.1 billion underwater natural gas pipeline connecting Mexico's Tuxpan port in the Gulf of Mexico with facilities on the U.S. side of the border in Texas.

In Chile and Peru, where we own two electric utilities – Chilquinta Energía and Luz del Sur – we are investing in new electric transmission and generation projects.

In addition to our external growth drivers, we also have undertaken an internal campaign to improve operational efficiencies and reduce costs companywide. I have great confidence that our external and internal initiatives will continue to produce successful results. Thank you for your continued faith in our company. We are committed to continuing to deliver superior returns and long-term value to you.

Sincerely,



DEBRA L. REED

Chairman, President and Chief Executive Officer



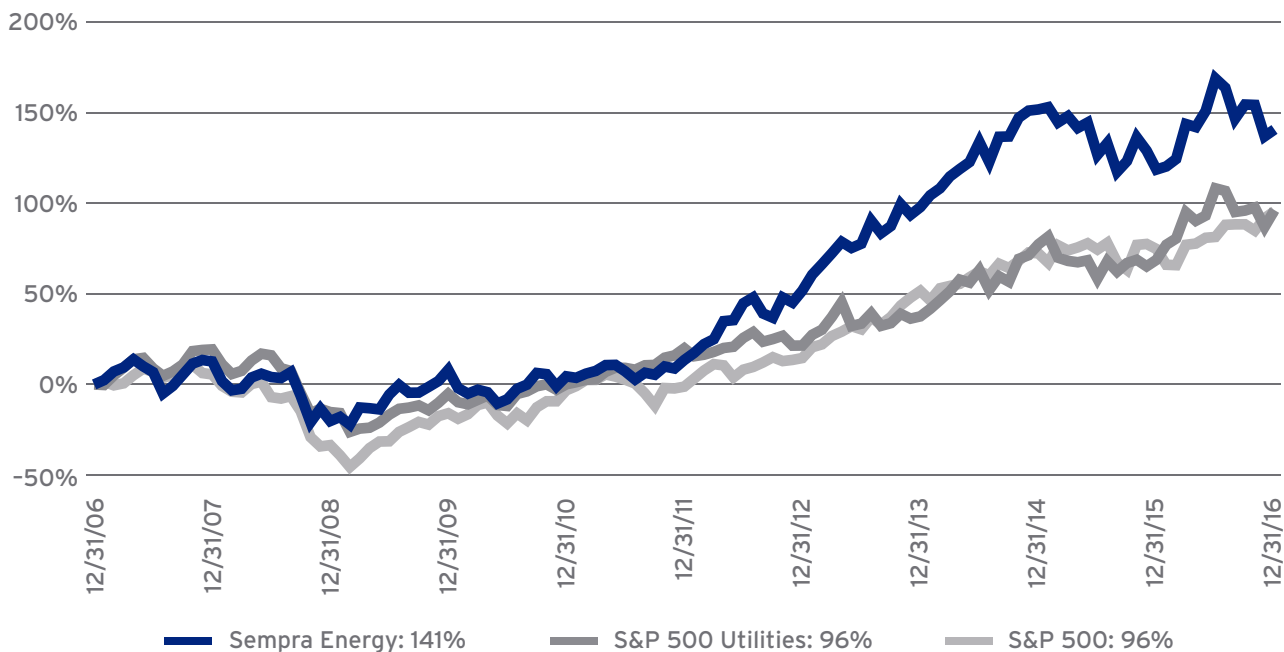
IEnova continues to expand its footprint in Mexico as the country opens up its energy market to private investment.

140%
Sempra Energy
dividend growth
2008-2017

FINANCIAL HIGHLIGHTS

Comparative Total Returns

Ten years ending 12/31/16



Consolidated Data

Dollars in millions, except per-share amounts

	2014	2015	2016
Revenues	\$ 11,035	\$ 10,231	\$ 10,183
Earnings	\$ 1,161	\$ 1,349	\$ 1,370
Adjusted Earnings ¹	\$ 1,182	\$ 1,298 ²	\$ 1,267
Earnings Per Share of Common Stock:			
Basic	\$ 4.72	\$ 5.43	\$ 5.48
Diluted	\$ 4.63	\$ 5.37	\$ 5.46
Adjusted Diluted ¹	\$ 4.71	\$ 5.17 ²	\$ 5.05
Weighted Average Number of Common Shares Outstanding (Diluted, in millions)	250.7	250.9	251.2
Total Assets	\$39,651	\$41,150	\$47,786
Common Dividends Declared Per Share	\$ 2.64	\$ 2.80	\$ 3.02
Debt to Total Capitalization	54%	54%	53%
Book Value Per Share	\$ 45.98	\$ 47.56	\$ 51.77
Capital Expenditures & Investments	\$ 3,363	\$ 3,356	\$ 5,796

¹ Sempra Energy adjusted earnings and adjusted diluted earnings per 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 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 Earnings Per Share" in the "Sempra Energy 2016 Financial Report" included herein.

² Adjusted earnings and adjusted diluted earnings per share for the year ended December 31, 2015, have been revised to include after-tax LNG development expenses of \$10 million, for consistency with 2016. LNG development expenses are included in adjusted earnings and adjusted diluted earnings per share in 2016.



2016 FINANCIAL REPORT



SEMPRA ENERGY FINANCIAL REPORT

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This Financial Report is a combined report for the following separate companies (each a separate Securities and Exchange Commission registrant):

Sempra Energy

San Diego Gas & Electric Company

Southern California Gas Company

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

We provide below:

- A description of our business
- An executive summary
- A discussion and analysis of our operating results for 2014 through 2016
- Information about our capital resources and liquidity
- Major factors expected to influence our future operating results
- A discussion of market risk affecting our businesses
- A table of accounting policies that we consider critical to our financial condition and results of operations

You should read Management’s Discussion and Analysis of Financial Condition and Results of Operations in conjunction with the Consolidated Financial Statements and the Notes to Consolidated Financial Statements included in this Annual Report, and also in conjunction with “Risk Factors” contained in our 2016 Annual Report on Form 10-K.

This report includes information for the following separate registrants:

- Sempra Energy and its consolidated entities
- San Diego Gas & Electric Company (SDG&E) and its consolidated variable interest entity (VIE)
- Southern California Gas Company (SoCalGas)

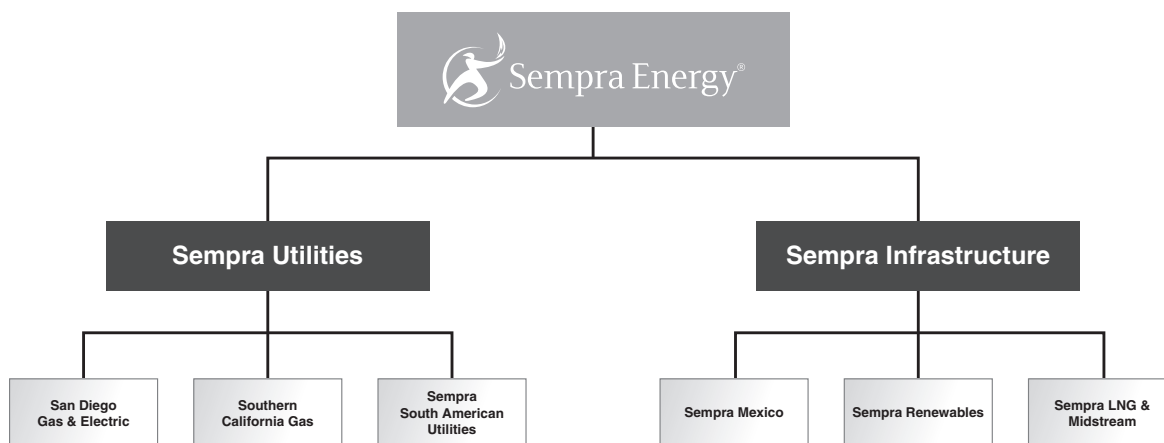
References to “we,” “our” and “Sempra Energy Consolidated” are to Sempra Energy and its consolidated entities, collectively, unless otherwise indicated by its context. All references to “Sempra Utilities” and “Sempra Infrastructure,” and to their respective principal segments, are not intended to refer to any legal entity with the same or similar name.

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.

OUR BUSINESS

Sempra Energy is a Fortune 500 energy-services holding company whose operating units invest in, develop and operate energy infrastructure, and provide gas and electricity services to their customers in North and South America. Our operating units, Sempra Utilities and Sempra Infrastructure, and their separate, reportable segments are illustrated below.



Prior to December 31, 2016, our reportable segments were grouped under the following operating units:

- California Utilities (which included the SDG&E and SoCalGas segments)
- Sempra International (which included the Sempra South American Utilities and Sempra Mexico segments)
- Sempra U.S. Gas & Power (which included the Sempra Renewables and Sempra Natural Gas segments)

The grouping of our segments within our operating units as of December 31, 2016 reflects a realignment of management oversight of our operations. As part of this realignment, we

changed the name of our “Sempra Natural Gas” segment to “Sempra LNG & Midstream.” This name change and the realignment of our segments within our new operating units had no impact on our historical financial position, results of operations, cash flows or segment results previously reported.

We provide the following for our reportable segments in the discussions below:

- Business overview
- Capital project updates

SDG&E

Business Overview

SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E)

Business summary	Market	Service territory
A regulated public utility; infrastructure supports electric generation, transmission and distribution, and natural gas distribution	<ul style="list-style-type: none"> ▪ Provides electricity to a population of 3.6 million (1.4 million meters) ▪ Provides natural gas to a population of 3.3 million (0.9 million meters) 	Serves the county of San Diego, California (electric and natural gas) and an adjacent portion of southern Orange County (electric only) covering 4,100 square miles

SDG&E delivers electricity to customers in San Diego County and an adjacent portion of southern Orange County, California. SDG&E’s electric energy is purchased from others or generated from its own electric generation facilities, which include Palomar Energy Center, Miramar Energy Center, Desert Star Energy Center and Cuyamaca Peak Energy Plant. SDG&E also delivers natural gas in San Diego County and transports electricity and natural gas for others.

SDG&E is regulated by federal, state and local governmental agencies, including:

- The California Public Utilities Commission (CPUC), which regulates SDG&E’s rates and operations in California.
- The Federal Energy Regulatory Commission (FERC), which regulates SDG&E’s electric transmission operations

and interstate transportation of natural gas and various related matters.

- The Nuclear Regulatory Commission (NRC), which regulates the San Onofre Nuclear Generating Station (SONGS).
- Municipalities and other local authorities, which may influence decisions affecting the location of utility assets, including natural gas pipelines and electric lines.

SDG&E’s financial statements include a VIE, Otay Mesa Energy Center LLC (Otay Mesa VIE), of which SDG&E is the primary beneficiary. As we discuss in Note 1 of the Notes to Consolidated Financial Statements in “Variable Interest Entities,” SDG&E has a long-term power purchase agreement (PPA) with Otay Mesa VIE.

Sempra Energy indirectly owns all of the outstanding capital stock of SDG&E.

Capital Project Updates

We summarize below information regarding certain major capital projects at SDG&E.

CAPITAL PROJECTS – SDG&E

Project description	Estimated cost (in millions)	Status
Cleveland National Forest (CNF) Transmission Projects		
<ul style="list-style-type: none"> 2012 application for various transmission line replacement projects in and around CNF, in order to promote fire safety. 	\$ 680	<ul style="list-style-type: none"> May 2016 CPUC final decision granted a permit to construct, at an estimated total cost of \$680 million: \$470 million for the various transmission-level facilities and \$210 million for associated distribution-level facilities, including distribution circuits and additional undergrounding required by the final environmental impact statement. July 2016, the CNF Foundation and the Protect Our Communities Foundation filed a joint application for rehearing of the final decision. Estimated completion: in phases through 2020
Sycamore-Peñasquitos Transmission Project		
<ul style="list-style-type: none"> 2014 application for a 230-kilovolt (kV) transmission project to provide 16.7-mile connection between Sycamore Canyon and Peñasquitos substations, in order to ensure grid reliability and access to renewable energy. 	\$ 260	<ul style="list-style-type: none"> October 2016 CPUC final decision granted a Certificate of Public Convenience and Necessity (CPCN) to construct project at an estimated cost not to exceed \$260 million. Estimated completion: 2018
South Orange County Reliability Enhancement		
<ul style="list-style-type: none"> 2012 application to replace/upgrade existing 230-kV transmission lines to enhance the capacity and reliability of electric service to the south Orange County area. 	\$ 381	<ul style="list-style-type: none"> December 2016 CPUC final decision granted a CPCN to construct SDG&E's proposed project at an estimated cost not to exceed \$381 million. In January 2017, the City of San Juan Capistrano and local opposition group, Frontlines, filed applications for rehearing of the final decision.
Electric Vehicle Charging		
<ul style="list-style-type: none"> 2014 application to build and own a total of 5,500 electric vehicle charging units at estimated cost of \$103 million, of which \$59 million is capital investment. 	\$ 45	<ul style="list-style-type: none"> January 2016 CPUC final decision denies proposal but authorizes a 3-year, \$45 million program providing up to 3,500 charging units. Estimated completion: 2020
<ul style="list-style-type: none"> January 2017 application, pursuant to Senate Bill (SB) 350, to perform various activities and make investments in support of electric vehicle charging at an estimated cost of \$349 million, of which \$298 million is capital investment. 	\$ 298	<ul style="list-style-type: none"> Application pending
Energy Storage Projects		
<ul style="list-style-type: none"> 2016 expedited application to own and operate two energy storage projects totaling 37.5 megawatts (MW) to enhance electric reliability in the San Diego service territory. 	Not disclosed	<ul style="list-style-type: none"> August 2016 CPUC approval. Estimated completion: first quarter of 2017

We discuss additional matters related to SDG&E in “California Utilities – Joint Matters” and in “Factors Influencing Future Performance.”

SOCALGAS

Business Overview

SOUTHERN CALIFORNIA GAS COMPANY

Business summary	Market	Service territory
A regulated public utility; infrastructure supports natural gas distribution, transmission and storage	<ul style="list-style-type: none"> ▪ Residential, commercial, industrial, utility electric generation and wholesale customers ▪ Covers a population of 21.7 million (5.9 million meters) 	Southern California and portions of central California (excluding San Diego County, the city of Long Beach and the desert area of San Bernardino County) covering 20,000 square miles

SoCalGas is the nation’s largest natural gas distribution utility, based on customer meters. It owns and operates a natural gas distribution, transmission and storage system that supplies natural gas throughout its service territory.

SoCalGas’ natural gas storage facilities have a combined working gas capacity of 137 billion cubic feet (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, through an open bid process.

SoCalGas is regulated by federal, state and local governmental agencies, including

- The CPUC, which regulates SoCalGas’ rates and operations in California.
- The California Department of Conservation’s Division of Oil, Gas, and Geothermal Resources (DOGGR), which regulates the operations of SoCalGas’ natural gas storage facilities.
- Municipalities and other local authorities, which may influence decisions affecting the location of utility assets, including natural gas pipelines and electric lines.

Sempra Energy indirectly owns all of the common stock of SoCalGas, which also has publicly held preferred stock with liquidation preferences totaling \$22 million, representing less than one percent of the ordinary voting power of SoCalGas shares.

In addition to general recurring improvements to its transmission and storage systems, over the next several years, SoCalGas expects to make significant capital expenditures for pipeline safety projects pursuant to the Pipeline Safety Enhancement Plan (PSEP). We discuss these capital projects in “California Utilities – Joint Matters,” below, and additional matters related to SoCalGas in “Factors Influencing Future Performance.” We also discuss matters concerning the Aliso Canyon natural gas storage facility in Note 15 of the Notes to Consolidated Financial Statements.

CALIFORNIA UTILITIES – JOINT MATTERS

We refer to SDG&E and SoCalGas collectively as the California Utilities, which do not include the utilities in our other segments.

CPUC General Rate Case (GRC)

The CPUC uses a general rate case proceeding to set sufficient rates to allow the California Utilities to recover their reasonable cost of operations and maintenance and to provide the opportunity to realize their authorized rates of return on their investment.

In June 2016, the CPUC approved a final decision (2016 GRC FD) in the California Utilities’ 2016 GRC, which is effective retroactive to January 1, 2016 and established their authorized 2016 revenue requirements and the ratemaking mechanisms by which those requirements would change on an annual basis over the subsequent three-year (2016-2018) period. The adopted revenue requirements associated with the seven-month period through July 2016 are being recovered in rates over a 17-month period, beginning August 2016.

The 2016 GRC FD also resulted in certain accounting and financial impacts associated with bonus depreciation, flow-through income tax repairs deductions related to prior years, and the treatment of differences between income tax incurred and income tax forecasted in the GRC for 2016 through 2018.

We discuss the 2016 GRC and the 2016 GRC FD in Note 14 of the Notes to Consolidated Financial Statements.

Incentive Mechanisms

The CPUC applies performance-based measures and incentive mechanisms to all California investor-owned utilities (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.

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

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.

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		
	2016	2015	2014	2016	2015	2014
For second half of 2014 and first half of 2015	\$ 4	\$ —	\$ —	\$ 4	\$ —	\$ —
For second half of 2013 and first half of 2014	—	7	—	—	4	—
For full year 2012 and first half of 2013	—	—	8	—	—	6

In September 2015, the CPUC issued a decision granting two rehearing requests filed by the Office of Ratepayer Advocates (ORA) and The Utility Reform Network (TURN) regarding the utility incentive awards for SDG&E and SoCalGas, as well as Southern California Edison Company (Edison) and Pacific Gas and Electric Company (PG&E), for program years 2006 through 2008, which totaled \$16 million for SDG&E and \$17 million for SoCalGas. In December 2016, SoCalGas and SDG&E submitted to the CPUC settlement agreements reached with ORA and TURN 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 the next three years 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. The CPUC issued a proposed decision in January 2017 approving the settlement agreements.

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' gas cost incentive mechanism (GCIM) is applied on the combined portfolio basis.

GCIM AWARDS RECORDED IN REVENUES

(Dollars in millions)

Award period (program years)	SoCalGas		
	2016	2015	2014
April 2014 – March 2015	\$ —	\$ 7	\$ —
April 2013 – March 2014	—	14	—
April 2012 – March 2013	—	—	6

In January 2017, the CPUC approved a \$5 million GCIM award for SoCalGas for the award period from April 2015 through March 2016.

Operational Incentives. The CPUC may establish operational incentives and associated performance

benchmarks as part of a general rate case 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.

Capital Project Updates

We summarize below information regarding certain joint capital projects of the California Utilities.

JOINT CAPITAL PROJECTS – CALIFORNIA UTILITIES

Project description	Estimated cost (in millions)	Status
Pipeline Safety & Reliability Project		
<ul style="list-style-type: none"> September 2015 application seeking authority to recover the full cost of the project, involving construction of an approximately 47-mile, 36-inch natural gas transmission pipeline in San Diego County. Would implement pipeline safety requirements and modernize system; improve system reliability and resiliency by minimizing dependence on a single pipeline; and enhance operational flexibility to manage stress conditions by increasing system capacity. 	\$ 633	<ul style="list-style-type: none"> March 2016 amended application provided detailed analysis and testimony supporting proposed project, and revised estimated cost of \$633 million. Revised request also presents additional information on costs and benefits of project alternatives, safety evaluation and compliance analysis, and statutory and procedural requirements. Procedural schedule set for two phases to address (1) long-term need and planning assumptions, and (2) costs, alternatives and environmental impacts. Phase 1 evidentiary hearings scheduled for second quarter of 2017, draft environmental impact report (EIR) by August 2018, and Phase 2 to follow the draft EIR.
Southern Gas System Reliability Project (North-South Pipeline)		
<ul style="list-style-type: none"> 2013 application sought authority to recover the full cost of the project intended to enhance reliability on the southern portions of the California Utilities' integrated natural gas transmission system (Southern System). 	\$ 21	<ul style="list-style-type: none"> July 2016 CPUC final decision denied the California Utilities' request for a permit to construct, resulting in SoCalGas recording a pretax impairment charge of \$21 million (\$13 million after-tax) in 2016 for the development costs invested in the project. Expect to seek recovery of all or a portion of these costs in a future general rate case filing.

We discuss additional matters related to the California Utilities in “Factors Influencing Future Performance.”

SEMPRA SOUTH AMERICAN UTILITIES

Business Overview

SEMPRA SOUTH AMERICAN UTILITIES

Business summary	Market	Service territory
Develops, owns and operates, or holds interests in electric transmission, distribution and generation infrastructure	<ul style="list-style-type: none"> Provides electricity to a population of approximately 2 million (approximately 0.7 million meters) in Chile and approximately 4.9 million consumers (approximately 1.1 million meters) in Peru 	<ul style="list-style-type: none"> Region of Valparaíso in central Chile Southern zone of metropolitan Lima, Peru

Chilquinta Energía S.A. (Chilquinta Energía), a wholly owned subsidiary of Sempra South American Utilities, is an electric distribution utility serving customers primarily in central Chile.

In November 2015, Chilquinta Energía's joint venture, Eletrans S.A., completed construction of a 220-kV

transmission line in Chile. The project earns a return in U.S. dollars, indexed to the Consumer Price Index (CPI) for 20 years and a regulated return thereafter.

Sempra South American Utilities owns 83.6 percent of Luz del Sur S.A.A. (Luz del Sur), an electric distribution utility that serves consumers in Peru, and delivers approximately

one-third of all power used in the country. The remaining shares of Luz del Sur trade on the Lima Stock Exchange (Bolsa de Valores de Lima) under the symbol LUSURC1.

In 2016, Luz del Sur completed construction of four substations and their related transmission lines in Lima. The capitalized cost of the project earns a regulated return for 30 years.

Luz del Sur owns Santa Teresa, a 100-MW hydroelectric power plant in Peru that began commercial operations in September 2015 and supplies electricity to non-regulated customers. Luz del Sur also sells excess electricity generated from the Santa Teresa plant into the spot market.

Sempre South American Utilities also owns interests in Tecnoled S.A. (Tecnoled) in Chile and Tecsur S.A. (Tecsur) in Peru, two energy-services companies that provide electric construction and infrastructure services to Chilquinta

Energía and Luz del Sur, as well as third parties. Tecnoled also sells electricity to non-regulated customers.

Revenues generated by our South American utilities, Chilquinta Energía and Luz del Sur, 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.

Capital Project Updates

We summarize below information regarding major projects in process at Sempra South American Utilities. Chilquinta Energía's projects will be financed by the joint venture partners during construction, and other financing may be pursued upon project completion. Luz del Sur intends to finance its projects through its existing debt program in Peru's capital markets.

MAJOR PROJECTS UNDER CONSTRUCTION AT DECEMBER 31, 2016 – SEMPRA SOUTH AMERICAN UTILITIES

Project description	Our share of estimated cost (in millions)	Status
Chilquinta Energía – Eletrans S.A.		
<ul style="list-style-type: none"> ▪ Second of two, 220-kV transmission lines awarded in May 2012. ▪ 50-mile transmission line extending from Ciruelos to Pichirropulli. ▪ 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 joint venture. 	\$ 42	<ul style="list-style-type: none"> ▪ Estimated completion: second half of 2017
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 60 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 joint venture. 	\$ 40	<ul style="list-style-type: none"> ▪ Estimated completion: 2018
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 five substations and related transmission lines. ▪ Once in operation, the capitalized cost of the projects will earn a regulated return for 30 years. 	\$ 130	<ul style="list-style-type: none"> ▪ Estimated completion: 2017 through 2020 as portions are completed

We discuss additional matters related to Sempra South American Utilities in “Factors Influencing Future Performance.”

SEMPRA MEXICO

Business Overview

SEMPRA MEXICO		
Business summary	Market	Geographic area
<p>Develops, owns and operates, or holds interests in:</p> <ul style="list-style-type: none"> ▪ natural gas transmission pipelines ▪ liquid petroleum gas (LPG) and ethane systems ▪ a natural gas distribution utility ▪ electric generation facilities, including wind, solar and a natural gas-fired power plant ▪ a terminal for the import of liquefied natural gas (LNG) ▪ a terminal for the storage of LPG ▪ marketing operations for the purchase of LNG and the purchase and sale of natural gas 	<ul style="list-style-type: none"> ▪ Natural gas ▪ Wholesale electricity ▪ Liquefied natural gas ▪ Liquid petroleum gas 	<ul style="list-style-type: none"> ▪ Mexico

Our Sempra Mexico segment includes the operating companies of our subsidiary, Infraestructura Energética Nova, S.A.B. de C.V. (IEnova), as well as certain holding companies and risk management activity. IEnova is a separate legal entity, and its common stock is traded on the Mexican Stock Exchange (La Bolsa Mexicana de Valores, S.A.B. de C.V., or BMV) under the symbol IENOVA. In October 2016, IEnova completed a private follow-on offering in the U.S. and outside of Mexico and a concurrent public offering in Mexico of its common stock. Upon completion of the equity offerings, Sempra Energy beneficially owns 66.4 percent of IEnova. Prior to the offerings, Sempra Energy beneficially owned 81.1 percent of IEnova. We discuss the offerings and IEnova further in Note 1 of the Notes to Consolidated Financial Statements.

Gas Business

Pipelines. Sempra Mexico develops, owns and operates natural gas transmission pipelines, and LPG and ethane systems in Mexico. These assets are contracted under long-term, U.S. dollar-based agreements with:

- Petróleos Mexicanos (or PEMEX, the Mexican state-owned oil company);
- the Federal Electricity Commission (Comisión Federal de Electricidad, or CFE);
- Shell México Gas Natural (Shell);
- Gazprom Marketing & Trading Mexico (Gazprom);
- Centro Nacional de Control de Gas (CENAGAS);
- InterGen; and
- other similar counterparties.

In 2016, we had contracted capacity for these assets of 11,257 million cubic feet (MMcf) per day of natural gas and ethane, and 114,000 barrels per day of LPG.

On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in Gasoductos de Chihuahua S. de R.L. de C.V. (GdC), increasing IEnova's ownership interest in GdC to 100 percent. GdC became a consolidated subsidiary of IEnova on this date. IEnova will continue holding an indirect 25-percent ownership interest in the Los Ramones Norte pipeline through GdC's 50-percent interest in Ductos y Energéticos del Norte, S. de R.L. de C.V. (DEN). As of the acquisition date, IEnova accounts for its 50-percent interest in DEN as an equity method investment. We expect the GdC acquisition to have strategic benefits, including opportunities for expansion into other infrastructure projects and a larger platform and presence in Mexico to participate in energy sector reform. We discuss the acquisition further in Note 3 of the Notes to Consolidated Financial Statements.

At December 31, 2016, IEnova has \$1.5 billion in goodwill related to its acquisition of GdC. Goodwill is subject to impairment testing annually, as we discuss in "Critical Accounting Policies and Estimates, and Key Noncash Performance Indicators" below and in Note 1 of the Notes to Consolidated Financial Statements.

LNG. Sempra Mexico's Energía Costa Azul LNG import terminal in Baja California, Mexico is capable of processing 1 Bcf of natural gas per day. The Energía Costa Azul facility generates revenue under capacity services 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 Contractors (Tangguh PSC), Sempra Mexico purchases from Sempra LNG & Midstream the LNG delivered to Energía Costa Azul by Tangguh PSC. Sempra Mexico uses the natural gas produced from this LNG and from purchases in the market 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 Southern California 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.

Natural Gas Distribution. Sempra Mexico's natural gas distribution utility, Ecogas México, S. de R.L. de C.V. (Ecogas), operates in three separate areas in Mexico, and had approximately 119,000 meters (serving more than 400,000 consumers) and sales volume of approximately 80 MMcf per day in 2016. Ecogas is subject to regulation by the Energy Regulatory Commission (Comisión Reguladora de Energía, or CRE) and by the labor and environmental agencies of city, state and federal governments in Mexico.

Power Business

Natural Gas-Fired Generation. Sempra Mexico's Termoeléctrica de Mexicali (TdM), a 625-MW natural gas-fired power plant, is located in Mexicali, Baja California, Mexico. It has an Energy Management

Agreement (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.

In February 2016, management approved a plan to market and sell TdM. As a result, we stopped depreciating the plant and classified the plant as held for sale. In connection with the sales process, in September 2016, Sempra Mexico obtained market information indicating that the fair value of TdM may be less than its carrying value. After performing an analysis of the information, Sempra Mexico reduced the carrying value of TdM by recognizing an impairment charge against earnings of \$90 million. We discuss TdM further in Notes 3 and 10 of the Notes to Consolidated Financial Statements.

Wind Power Generation. We provide information on the Energía Sierra Juárez wind power generation project and IEnova's acquisition of the Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika) wind power generation facilities in the table below and in Note 3 of the Notes to Consolidated Financial Statements.

The following map shows the location of Sempra Mexico's principal assets and investments:



The table below summarizes certain projects that were completed, either by IEnova or through its joint venture partnerships, or acquired during the last three years.

PROJECTS COMPLETED OR ACQUIRED IN 2016, 2015 AND 2014 – SEMPRA MEXICO

Project description	
Ethane Pipeline	
<ul style="list-style-type: none"> ▪ 140-mile pipeline to transport ethane from Tabasco, Mexico to Veracruz, Mexico. ▪ Capacity fully contracted under 21-year contract with PEMEX denominated in U.S. dollars. ▪ Wholly owned by IEnova through GdC acquisition. 	<ul style="list-style-type: none"> ▪ Completed in phases during 2015.
Los Ramones Pipeline – First Phase	
<ul style="list-style-type: none"> ▪ 72-mile pipeline extending from Tamaulipas to Nuevo Leon. ▪ Two compression stations. ▪ Capacity fully contracted by CENAGAS under 25-year contract denominated in Mexican pesos, indexed to the U.S. dollar (adjusted annually for inflation and fluctuation of exchange rate). ▪ Wholly owned by IEnova through GdC acquisition. 	<ul style="list-style-type: none"> ▪ Pipeline began operations at the end of 2014. ▪ Compression stations completed in December 2015.
Los Ramones Norte Pipeline	
<ul style="list-style-type: none"> ▪ 280-mile pipeline, which connects first phase of Los Ramones, from Nuevo Leon to San Luis Potosi. ▪ Two compression stations. ▪ Capacity fully contracted by CENAGAS under 25-year contract denominated in Mexican pesos, indexed to the U.S. dollar (adjusted annually for inflation and fluctuation of exchange rate). ▪ IEnova holds indirect 25-percent ownership through DEN joint venture. 	<ul style="list-style-type: none"> ▪ Pipeline began operations in February 2016. ▪ Compression stations completed in June 2016.
Energía Sierra Juárez Wind	
<ul style="list-style-type: none"> ▪ Wind power generation project in Baja California. ▪ SDG&E has a 20-year contract for up to 155 MW of renewable power supplied from first phase of project. ▪ First phase of project jointly owned with InterGen N.V. 	<ul style="list-style-type: none"> ▪ First phase began operations in June 2015.
Ventika Wind	
<ul style="list-style-type: none"> ▪ Fully operational 252-MW wind farm located in Nuevo Leon, Mexico. ▪ Acquired for cash of \$310 million plus the assumption of \$610 million of existing debt. ▪ All capacity contracted under 20-year, U.S. dollar-denominated contracts with five private off-takers. 	<ul style="list-style-type: none"> ▪ Acquired by IEnova in December 2016.

Capital Project Updates

We summarize major projects in process at Sempra Mexico below. 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 “Risk Factors” in our 2016 Annual Report on Form 10-K.

MAJOR PROJECTS UNDER CONSTRUCTION AT DECEMBER 31, 2016 – SEMPRA MEXICO

Project description	Our share of estimated cost (in millions)	Status
Sonora Pipeline		
<ul style="list-style-type: none"> ▪ Sempra Mexico awarded two contracts in October 2012 by the CFE to build and operate a 500-mile pipeline network. ▪ Comprised of two segments that will interconnect to the U.S. interstate pipeline system. ▪ Pipeline to transport natural gas from the U.S.-Mexico border south of Tucson, Arizona through the Mexican state of Sonora to the northern part of the Mexican state of Sinaloa along the Gulf of California. ▪ Capacity is fully contracted by the CFE under two 25-year contracts denominated in U.S. dollars. 	\$ 1,000	<ul style="list-style-type: none"> ▪ First segment completed in stages from fourth quarter of 2014 through August 2015. ▪ Estimated completion: first half of 2017
Ojinaga Pipeline		
<ul style="list-style-type: none"> ▪ December 2014 agreement with CFE for development, construction and operation of the approximately 137-mile pipeline. ▪ Natural gas transportation services agreement for a 25-year term, denominated in U.S. dollars, for 100 percent of the transport capacity, equal to 1.4 Bcf per day. 	\$ 300	<ul style="list-style-type: none"> ▪ Estimated completion: first half of 2017
San Isidro Pipeline		
<ul style="list-style-type: none"> ▪ July 2015 agreement with CFE for development, construction and operation of the approximately 14-mile pipeline. ▪ Natural gas transportation services agreement for a 25-year term, denominated in U.S. dollars, for 100 percent of the transport capacity, equal to 1.1 Bcf per day. 	\$ 110	<ul style="list-style-type: none"> ▪ Estimated completion: first half of 2017
Sur de Texas – Tuxpan Marine Pipeline		
<ul style="list-style-type: none"> ▪ In June 2016, Infraestructura Marina del Golfo, a joint venture between IEnova and a subsidiary of TransCanada Corporation, was awarded the right to build, own and operate the natural gas pipeline by the CFE. ▪ Sempra Mexico has a 40-percent interest in the joint venture and TransCanada Corporation owns the remaining 60-percent interest. ▪ Natural gas transportation services agreement for a 25-year term, denominated in U.S. dollars. 	\$ 840	<ul style="list-style-type: none"> ▪ Estimated completion: second half of 2018
La Rumorosa and Tepezalá II Solar Complexes		
<ul style="list-style-type: none"> ▪ In September 2016, IEnova was awarded two solar energy projects in an auction conducted by Mexico’s National Center of Electricity Control (Centro Nacional de Control de Energía). ▪ La Rumorosa Solar complex is a 41-MW photovoltaic project located in Baja California, Mexico. ▪ Tepezalá II Solar complex is a 100-MW photovoltaic project located in Aguascalientes, Mexico. ▪ Contracted by the CFE under a 15-year renewable energy and capacity agreement and a 20-year clean energy certificate agreement. 	\$ 150	<ul style="list-style-type: none"> ▪ Estimated completion: first half of 2019

We discuss additional matters related to Sempra Mexico in “Factors Influencing Future Performance.”

SEMPRA RENEWABLES

Business Overview

SEMPRA RENEWABLES

Business summary	Market	Geographic area
Develops, owns, operates, or holds interests in renewable energy generation projects	▪ Wholesale electricity	▪ U.S.A.

Sempra Renewables develops, invests in and operates renewable energy generation projects that have long-term contracts with electric load serving entities, which provide electric service to end-users and wholesale customers.

The majority of Sempra Renewables' wind farm assets earn production tax credits (PTC) based on the number of megawatt hours of electricity they generate. A PTC is a federal subsidy that pays wind-energy producers a flat rate for generating clean energy. Because PTCs last for ten years after project completion, any wind turbine that is under construction before the end of 2019 will earn a full decade of PTCs at phased-out rates beginning with construction starting in 2017 through 2019. For each of the years ended December 31, 2016, 2015 and 2014, PTCs represented a large portion of our wind farm earnings, often exceeding earnings from operations.

Certain of Sempra Renewables' wind and solar power 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. We discuss these tax equity arrangements in "Variable Interest Entities" and in "Noncontrolling Interests" in Note 1 of the Notes to Consolidated Financial Statements.

The following table provides information about the Sempra Renewables wind and solar energy generation facilities that were operational as of December 31, 2016. The generating capacity of these facilities is fully contracted under long-term PPAs for the periods indicated in the table.

SEMPRA RENEWABLES OPERATING FACILITIES

Capacity in Megawatts at December 31, 2016

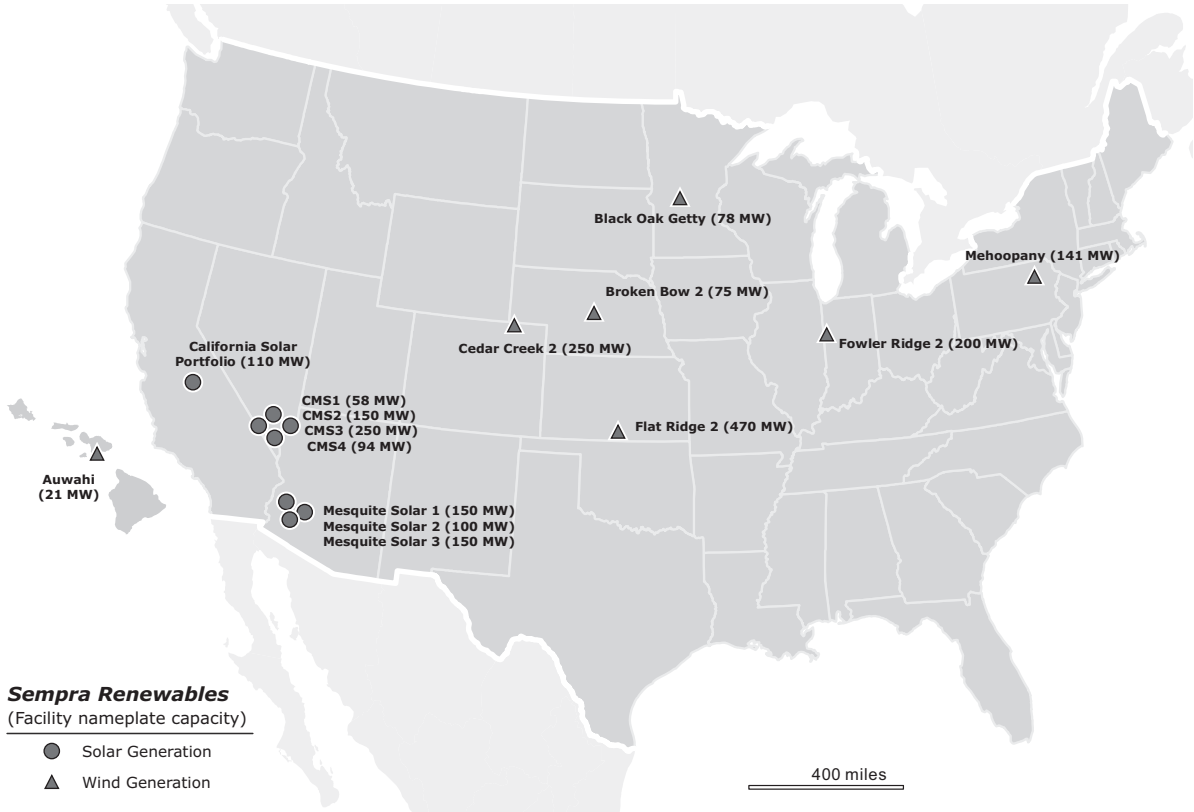
Name	Generating capacity	PPA term in years	First in service ⁽¹⁾	Location
<i>Wholly owned facility:</i>				
Copper Mountain Solar 1	58	20	2008	Boulder City, Nevada
Total	58			
<i>Tax equity-owned facilities⁽²⁾:</i>				
Black Oak Getty Wind	78	20	2016	Stearns County, Minnesota
Copper Mountain Solar 4	94	20	2016	Boulder City, Nevada
Mesquite Solar 2	100	20	2016	Maricopa County, Arizona
Mesquite Solar 3	150	25	2016	Maricopa County, Arizona
Total	422			
<i>Jointly owned facilities⁽³⁾:</i>				
Auwahi Wind	11	20	2012	Maui, Hawaii
Broken Bow 2 Wind	38	25	2014	Custer County, Nebraska
Cedar Creek 2 Wind	125	25	2011	New Raymer, Colorado
Flat Ridge 2 Wind	235	20 and 25	2012	Wichita, Kansas
Fowler Ridge 2 Wind	100	20	2009	Benton County, Indiana
Mehoopany Wind	71	20	2012	Wyoming County, Pennsylvania
Total wind	580			
California solar partnership	55	25	2013	Tulare and Kings Counties, California
Copper Mountain Solar 2	75	25	2012	Boulder City, Nevada
Copper Mountain Solar 3	125	20	2014	Boulder City, Nevada
Mesquite Solar 1	75	20	2011	Maricopa County, Arizona
Total solar	330			
Total MW in operation	1,390			

⁽¹⁾ If placed in service in phases, indicates the year the first phase went into service.

⁽²⁾ Represents facilities that we own through tax equity arrangements. We consolidate these entities and report noncontrolling interests.

⁽³⁾ Sempra Renewables has a 50-percent interest in each of these facilities and accounts for them as equity method investments. The generating capacity represents Sempra Renewables' share only.

The following map shows the location and full nameplate generating capacity of Sempra Renewables' projects in operation as of December 31, 2016:



SEMPRA LNG & MIDSTREAM

Business Overview

SEMPRA LNG & MIDSTREAM

Business summary	Market	Geographic area
<p>Develops, owns and operates, or holds interests in LNG and natural gas midstream assets and operations:</p> <ul style="list-style-type: none"> ▪ a terminal in the U.S. for the import and export of LNG and sale of natural gas ▪ natural gas pipelines and storage facilities ▪ marketing operations 	<ul style="list-style-type: none"> ▪ Liquefied natural gas ▪ Natural gas 	<ul style="list-style-type: none"> ▪ U.S.A.

Sempra LNG & Midstream develops and invests in LNG-related infrastructure and has a 50.2-percent equity interest in the Cameron LNG regasification terminal and the Cameron LNG liquefaction project under construction in Louisiana, a project developed and permitted by Sempra LNG & Midstream. Sempra LNG & Midstream develops, owns and operates, or holds interests in, natural gas underground storage and related pipeline facilities in Alabama, Louisiana and Mississippi. It also 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.

LNG

In August 2014, Sempra Energy and three project partners provided their respective final investment decision with regard to the Cameron LNG Holdings, LLC (Cameron LNG JV) joint venture for the development, construction and operation of a three-train natural gas liquefaction export facility at the existing Cameron LNG, LLC regasification terminal. Beginning from the October 1, 2014 joint venture effective date, Cameron LNG, LLC was no longer wholly owned, and Sempra LNG & Midstream began accounting for its investment in the joint venture under the equity method. We discuss the 2014 formation of the Cameron LNG JV, including the contribution of our share of equity to the joint venture through the contribution of the Cameron LNG, LLC regasification terminal in Hackberry, Louisiana, in Note 3 of the Notes to Consolidated Financial Statements.

The existing regasification terminal is capable of processing 1.5 Bcf of natural gas per day, and it currently generates revenue under a terminal services agreement for approximately 3.75 Bcf of natural gas storage and associated send-out rights of approximately 600 MMcf of natural gas per day through 2029. The agreement allows the customer to pay capacity reservation and usage fees to use the facilities to receive, store and regasify the customer's LNG.

There is an agreement in place that will result in the termination of the current terminal services agreement at the point during construction of the new liquefaction facilities when piping tie-ins to the existing regasification terminal become necessary, which we expect to occur when progress on the construction of the three-train liquefaction project, described below, makes regasification no longer possible under the terms of the services agreement.

Sempra LNG & Midstream has 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 Energía Costa Azul receipt terminal at a price based on the Southern California 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.

Storage

Sempra LNG & Midstream has 42 Bcf of operational working natural gas storage capacity and a project under development as follows:

- Bay Gas Storage Company, Ltd. 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 91 percent of the project. It is the easternmost salt dome storage facility on the Gulf Coast, with direct service to the Florida market and markets across the Southeast, Mid-Atlantic and Northeast regions.
- Mississippi Hub, LLC (Mississippi Hub) is an underground salt dome with 22 Bcf of operational working natural gas storage capacity located 45 miles southeast of Jackson, Mississippi. It has access to natural gas from

shale basins of East Texas and Louisiana, traditional Gulf Coast supplies and LNG, with multiple interconnections to serve the Southeast and Northeast regions.

- LA Storage is a salt cavern development project in Cameron Parish, Louisiana. Sempra LNG & Midstream owns 77 percent of the project and ProLiance Transportation LLC owns the remaining 23 percent. The project's location provides access to several LNG facilities in the area and could be positioned to support LNG export from various liquefaction terminals, when operational, if anticipated cash flows support further investment.

Transportation

In the second quarter of 2016, Sempra LNG & Midstream sold its 25-percent interest in Rockies Express Pipeline LLC (Rockies Express) and permanently released pipeline capacity that it held with Rockies Express and others. We discuss Rockies Express further in Notes 3 and 15 of the Notes to Consolidated Financial Statements.

Generation

Sempra LNG & Midstream sells electricity under short-term and long-term contracts and into the spot market and other competitive markets. Sempra LNG & Midstream purchases natural gas to fuel Sempra Mexico's TdM power plant, described above, and prior to April 2015, to fuel its Mesquite Power natural gas-fired power plant. Sempra LNG & Midstream sold the first 625-MW block of the Mesquite

Power plant in February 2013 and the remaining 625-MW block, together with a related power sales contract, in April 2015.

Sempra LNG & Midstream 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 – Business Overview – Power Business – Natural Gas-Fired Generation" above.

Distribution

As we discuss in Note 3 of the Notes to Consolidated Financial Statements, in September 2016, Sempra LNG & Midstream sold 100 percent of the outstanding equity of EnergySouth Inc. (EnergySouth), the parent company of Mobile Gas Service Corporation (Mobile Gas) and Willmut Gas Company (Willmut Gas). Mobile Gas and Willmut Gas are regulated natural gas distribution utilities in southwest Alabama and in Mississippi, respectively.

Capital Project Updates

We summarize the Cameron LNG JV three-train liquefaction project below. Sempra LNG & Midstream's ability to successfully complete major infrastructure projects is subject to a number of risks and uncertainties, which we discuss below and in "Risk Factors" in our 2016 Annual Report on Form 10-K.

MAJOR PROJECT UNDER CONSTRUCTION AT DECEMBER 31, 2016 – SEMPRA LNG & MIDSTREAM

Project description	Status
Cameron LNG JV Three-Train Liquefaction Project	
<ul style="list-style-type: none"> ▪ Construction began in the second half of 2014. ▪ Sempra Energy contributed Cameron LNG, LLC's existing facilities to Cameron LNG JV. ▪ Capacity of 13.9 million tonnes per annum (Mtpa) of LNG with an expected export capability of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. ▪ Anticipated incremental investment of approximately \$7 billion. ▪ Authorized to export LNG to both Free Trade Agreement (FTA) and non-FTA countries. ▪ 20-year liquefaction and regasification tolling capacity agreements for full nameplate capacity. 	<ul style="list-style-type: none"> ▪ Cameron LNG JV has received authorizations from the U.S. Department of Energy (DOE) to export up to 14.95 Mtpa of LNG to FTA and Non-FTA countries. ▪ Latest indication by the EPC contractor for in-service dates: mid-2018 for train one, late 2018 for train two, and mid-2019 for train three.

Cameron LNG JV Three-Train Liquefaction Project

Construction on the current three-train liquefaction project began in the second half of 2014 under an engineering, procurement and construction (EPC) contract with a joint venture between CB&I Shaw Constructors, Inc., a wholly owned subsidiary of Chicago Bridge & Iron Company N.V.,

and Chiyoda International Corporation, a wholly owned subsidiary of Chiyoda Corporation.

- *Incremental investment.* The anticipated incremental investment by Cameron LNG JV in the three-train liquefaction project is estimated to be approximately \$7 billion, including the cost of the lump-sum, turnkey

EPC contract, development engineering costs and permitting costs, but excluding capitalized interest and other financing costs. The majority of the incremental investment will be project-financed and the balance provided by the project partners. 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. If construction, financing or other project costs are higher than we currently expect, we may have to contribute additional cash exceeding our current expectations.

- *Total estimated cost.* The total cost of the facility, including the cost of our original facility contributed to the joint venture plus interest during construction, financing costs and required reserves, is estimated to be approximately \$10 billion.
- *Construction delay.* In late October 2016, Cameron LNG JV received indication from the EPC contractor that the in-service date for each train may be delayed. Any such construction delays would defer a portion of the 2018 and 2019 earnings anticipated from this project.
- *Transportation agreements.* 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 ENGIE S.A. and affiliates of Mitsubishi Corporation and Mitsui & Co., Ltd. The terms of these agreements are concurrent with the liquefaction and regasification tolling capacity agreements.
- *Financing agreements and guarantees.* Sempra Energy and the project partners executed project financing documents and completion guarantees, which became effective on October 1, 2014 and will terminate upon financial completion of the project. Sempra Energy and the project partners executed project financing documents for senior secured debt in an initial 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 \$3.9 billion. The project financing and completion guarantees became effective on October 1, 2014, and 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.

We discuss matters related to Cameron LNG JV further in Notes 3 and 4 of the Notes to Consolidated Financial Statements.

We discuss additional matters related to Sempra LNG & Midstream, including Cameron LNG JV, in "Factors Influencing Future Performance."

EXECUTIVE SUMMARY

BUSINESS STRATEGY

Our objective is to increase shareholder value by developing, investing in and operating long-term-contracted energy infrastructure assets and operating our regulated utilities in a safe and reliable manner.

The key components of our strategy include the following disciplined growth platforms:

- U.S. and South American utilities
- U.S. and Mexican energy infrastructure

Operating within these areas, we are focused on generating stable, predictable earnings and cash flows by investing in assets that are primarily regulated or contracted on a long-term basis. We have a robust capital program and take a disciplined approach to deploying this capital to areas that fit our strategy and are designed to create shareholder value. By doing so, our goal is to deliver long-term growth above the utility average, but with a commensurate risk profile.

KEY EVENTS AND ISSUES IN 2016

Below are key events and issues that affected our business in 2016; some of these may continue to affect our future results.

- In March 2016, Sempra LNG & Midstream recorded an impairment charge related to its investment in Rockies Express (\$27 million earnings impact).
- In May 2016, Sempra LNG & Midstream recorded a charge related to permanently released pipeline capacity with Rockies Express and others (\$123 million earnings impact).
- In June 2016, the CPUC approved a final decision (2016 GRC FD) in the California Utilities' 2016 GRC, effective retroactive to January 1, 2016.
- In September 2016, Sempra Mexico reduced the carrying value of TdM by recognizing an impairment charge (\$90 million earnings impact).
- In September 2016, Sempra LNG & Midstream recorded a gain on the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas (\$78 million earnings impact).

- In September 2016, Sempra Mexico’s subsidiary, IEnova, purchased the remaining 50-percent interest in GdC for \$1.144 billion, and recorded a noncash gain associated with the remeasurement of its 50-percent equity interest in GdC immediately prior to the transaction (\$350 million earnings impact).
- 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, generating net proceeds of approximately \$1.57 billion. Sempra Energy also purchased stock in the Mexican offering. Upon completion of the equity offerings, our beneficial ownership of IEnova decreased from 81.1 percent to 66.4 percent.
- In December 2016, Sempra Mexico acquired the 252-MW Ventika wind power generation facilities in Nuevo Leon, Mexico for cash of \$310 million, plus the assumption of \$610 million of existing debt.
- As of December 31, 2016, SoCalGas has recorded an estimated \$780 million for certain costs and \$606 million for expected recovery of costs from insurance related to the Aliso Canyon natural gas storage facility gas leak, which we discuss further in Note 15 of the Notes to Consolidated Financial Statements.

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). Variance amounts presented are the after-tax earnings impact (based on applicable statutory tax rates), unless otherwise noted, and before noncontrolling interests, where applicable.

SEMPRA ENERGY EARNINGS (LOSSES) BY SEGMENT

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Sempra Utilities:			
SDG&E	\$ 570	\$ 587	\$ 507
SoCalGas ⁽¹⁾	349	419	332
Sempra South American Utilities	156	175	172
Sempra Infrastructure:			
Sempra Mexico	463	213	192
Sempra Renewables	55	63	81
Sempra LNG & Midstream	(107)	44	50
Parent and other ⁽²⁾	(116)	(152)	(173)
Earnings	\$1,370	\$1,349	\$1,161

⁽¹⁾ After preferred dividends.

⁽²⁾ Includes after-tax interest expense (\$169 million in 2016, \$157 million in 2015 and \$144 million in 2014), intercompany eliminations recorded in consolidation and certain corporate costs.

RESULTS OF OPERATIONS

We discuss the following in Results of Operations:

- Overall results of our operations
- Our segment results
- Adjusted earnings and adjusted earnings per share
- Significant changes in revenues, costs and earnings between periods

OVERALL RESULTS OF OPERATIONS OF SEMPRA ENERGY

In 2016, our earnings increased by \$21 million (2%) to \$1.4 billion and our diluted earnings per share increased by \$0.09 per share (2%) to \$5.46 per share. In 2015 compared to 2014, our earnings increased by \$188 million (16%) to \$1.3 billion and our diluted earnings per share increased by \$0.74 per share (16%) to \$5.37 per share. Our earnings and diluted earnings per share were impacted by variances discussed in “Segment Results” below and by the items included in the table “Sempra Energy Adjusted Earnings and Adjusted Earnings Per Share,” also below.

SEMPRA UTILITIES

SDG&E

The decrease in earnings of \$17 million (3%) in 2016 was primarily due to:

- \$31 million of charges associated with prior years' income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD (\$22 million related to 2015 estimated benefits and \$9 million related to the true-up of 2012-2014 estimated benefits used in the 2016 GRC FD to actuals), as we discuss in Notes 6 and 14 of the Notes to Consolidated Financial Statements;
- \$15 million reduction to the loss from plant closure in 2015 primarily based on the CPUC approval of a compliance filing related to SDG&E's authorized recovery of its investment in SONGS pursuant to an amended settlement agreement approved by the CPUC in 2014;
- \$9 million lower favorable impact in 2016 related to the resolution of prior years' income tax items; and
- \$7 million lower earnings from electric transmission primarily due to lower formulaic revenues associated with lower borrowing costs; **offset by**
- \$23 million higher CPUC base operating margin authorized for 2016, including lower generation major maintenance costs, and lower non-refundable operating costs;
- \$9 million increase in allowance for funds used during construction (AFUDC) related to equity;
- \$7 million related to excess tax benefits associated with the adoption of a new accounting standard related to share-based compensation; and
- \$7 million lower net interest expense.

The increase in earnings of \$80 million (16%) in 2015 compared to 2014 was primarily due to:

- \$15 million reduction to the loss from plant closure in 2015 compared to a \$21 million charge in 2014 to adjust the total loss from plant closure;
- \$26 million higher earnings from electric transmission operations primarily due to higher rate base;
- \$14 million higher CPUC base operating margin authorized for 2015, and lower non-refundable operating costs;
- \$7 million lower generation major maintenance costs; and
- \$7 million higher favorable resolution of prior years' income tax items; **offset by**
- \$7 million higher earnings in 2014 associated with SDG&E's annual FERC formulaic rate adjustment.

SoCalGas

The decrease in earnings of \$70 million (17%) in 2016 was primarily due to:

- \$49 million of charges associated with prior years' income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD (\$43 million related to 2015 estimated benefits and \$6 million related to the true-up of 2012-2014 estimated benefits used in the 2016 GRC FD to actuals);
- \$16 million charge associated with tracking the 2016 income tax benefit from certain flow-through items in relation to forecasted amounts in the 2016 GRC FD, as we discuss in Notes 6 and 14 of the Notes to Consolidated Financial Statements;
- \$16 million lower favorable impact in 2016 related to the resolution of prior years' income tax items;
- \$13 million impairment of assets related to the Southern Gas System Reliability project;
- \$13 million lower regulatory awards;
- \$11 million of earnings in 2015 from a CPUC-approved retroactive increase in authorized GRC revenue requirement for years 2012 through 2014 due to increased rate base; and
- \$8 million higher net interest expense primarily due to debt issuances in the second quarter of 2015; **offset by**
- \$27 million higher CPUC base operating margin authorized for 2016, and lower non-refundable operating costs; and
- \$23 million higher earnings associated with the PSEP and advanced metering assets.

The increase in earnings of \$87 million (26%) in 2015 compared to 2014 was primarily due to:

- \$34 million higher earnings primarily due to a lower effective tax rate, including \$11 million earnings impact from higher favorable resolution of prior years' income tax items in 2015;
- \$31 million higher CPUC base operating margin authorized for 2015, and lower non-refundable operating costs;
- \$11 million of earnings from a retroactive increase, approved by the CPUC in 2015, in authorized GRC revenue requirement for years 2012 through 2014 due to increased rate base;
- \$10 million from an increase in AFUDC related to equity; and
- \$8 million higher regulatory awards; **offset by**
- \$8 million higher interest expense.

Sempra South American Utilities

Because our operations in South America 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. The year-to-year variances discussed below are as adjusted for the difference in foreign currency translation rates between years. We discuss these and other foreign currency effects below in "Impact of Foreign Currency and Inflation Rates on Results of Operations."

The decrease in earnings of \$19 million (11%) in 2016 was primarily due to:

- \$15 million higher income tax expense, including \$17 million related to Peruvian tax reform, as we discuss below in "Changes in Revenues, Costs and Earnings – Income Taxes;"
- \$9 million lower earnings from foreign currency translation effects;
- \$7 million business interruption insurance proceeds in 2015 for the Santa Teresa hydroelectric power plant, which was expected to begin commercial operation in September 2014, but did not commence operation until September 2015 due to construction delays; and
- \$3 million primarily due to lower capitalized interest due to completion of construction of the Santa Teresa hydroelectric power plant in 2015; **offset by**
- \$10 million higher earnings from operations mainly due to the start of operations of the Santa Teresa hydroelectric power plant in September 2015.

The increase in earnings of \$3 million (2%) in 2015 compared to 2014 was primarily due to:

- \$21 million higher earnings from operations, mainly in Peru, due to an increase in volumes and rates, which rates include foreign currency adjustments;
- \$7 million business interruption insurance proceeds for the Santa Teresa hydroelectric power plant;
- \$4 million higher earnings from early termination fees from commercial power contracts;
- \$4 million decrease in earnings attributable to noncontrolling interests in 2015; and
- \$3 million lower net interest expense, mainly in Chile, related to inflationary effect on local bonds; **offset by**
- \$20 million lower earnings from foreign currency translation effects;
- \$9 million higher income tax expense, including \$18 million income tax benefit in 2014 related to Peruvian tax reform, offset by \$6 million income tax expense in 2014

related to Chilean tax reform, as we discuss below in "Changes in Revenues, Costs and Earnings – Income Taxes;" and

- \$8 million lower earnings associated with the relocation of electrical infrastructure.

SEMPRA INFRASTRUCTURE

Sempra Mexico

The increase in earnings of \$250 million in 2016 was primarily due to:

- \$432 million noncash gain associated with the remeasurement of our 50-percent equity interest in GdC, as we discuss in Note 3 of the Notes to Consolidated Financial Statements;
- \$20 million incremental earnings from the increase in our ownership interest in GdC from 50 percent to 100 percent on September 26, 2016; and
- \$8 million increase in earnings from our distribution company mainly associated with new distribution rates; **offset by**
- \$111 million impairment of TdM assets held for sale;
- \$80 million increase in earnings attributable to noncontrolling interests at IEnova, as we discuss below in "Changes in Revenues, Costs and Earnings – Earnings Attributable to Noncontrolling Interests;"
- \$36 million favorable impact in 2016 compared to \$49 million favorable impact in 2015 due primarily to transactional effects from foreign currency and inflation, including amounts in equity earnings from our joint ventures; and
- \$8 million deferred income tax expense on our investment in the TdM natural gas-fired power plant as a result of management's decision to hold the asset for sale.

The increase in earnings of \$21 million (11%) in 2015 compared to 2014 was primarily due to:

- \$37 million higher pipeline earnings, primarily due to the start of operations of certain pipelines in the fourth quarter of 2014; and
- \$31 million favorable variance due to effects from foreign currency and inflation, including amounts in earnings from our joint ventures; **offset by**
- \$5 million losses in 2015 from operations at our TdM power plant compared to \$13 million earnings for the same period in 2014, primarily due to lower capacity revenues and lower volumes;
- \$14 million gain in 2014 from the sale of a 50-percent equity interest in the first phase of the Energía Sierra Juárez project;

- \$10 million unfavorable impact from income taxes (\$5 million expense in 2015 compared to \$5 million benefit in 2014); and
- \$6 million increase in earnings attributable to noncontrolling interests at IEnova.

Sempra Renewables

The decrease in earnings of \$8 million (13%) in 2016 was primarily due to:

- \$12 million lower solar investment tax credits from projects placed in service in 2015; and
- \$5 million gain in 2015 from the sale of the Rosamond Solar development project; **offset by**
- \$8 million higher earnings from increased production at our wind and solar assets.

The decrease in earnings of \$18 million (22%) in 2015 compared to 2014 was primarily due to:

- \$24 million gains in 2014 from the sale of 50-percent equity interests in Copper Mountain Solar 3 and Broken Bow 2 Wind; **offset by**
- \$5 million gain in 2015 from the sale of the Rosamond Solar development project; and
- \$4 million higher earnings from increased solar capacity, offset by lower earnings from decreased production at wind projects.

Sempra LNG & Midstream

The decrease of \$151 million in 2016 was primarily due to:

- \$123 million loss on permanent release of pipeline capacity, as we discuss in Note 15 of the Notes to Consolidated Financial Statements;
- \$36 million gain in 2015 on the sale of the remaining 625-MW block of the Mesquite Power plant, net of related expenses;
- \$36 million lower equity earnings resulting from the sale of the investment in Rockies Express;
- \$27 million impairment charge in the first quarter of 2016 related to the investment in Rockies Express; and
- \$15 million lower results primarily driven by changes in natural gas prices; **offset by**
- \$78 million gain on the sale of EnergySouth, net of related expenses, as we discuss in Note 3 of the Notes to Consolidated Financial Statements.

The decrease in earnings of \$6 million (12%) in 2015 compared to 2014 was primarily due to:

- \$29 million lower results primarily driven by the effect of lower natural gas prices;

- \$25 million tax benefit in 2014 due to the release of Louisiana state valuation allowance against a deferred tax asset associated with Cameron LNG developments; and
- \$10 million development expense associated with the potential expansion of our LNG business; **offset by**
- \$36 million gain in 2015 on the sale of the remaining 625-MW block of the Mesquite Power plant and a related power sale contract, net of related expenses;
- \$11 million higher equity earnings from Rockies Express due to additional capacity placed in service in 2015; and
- \$9 million lower net losses from the Mesquite Power plant due to the sale of the remaining block in April 2015.

Parent and Other

The decrease in losses of \$36 million (24%) in 2016 was primarily due to:

- \$32 million higher income tax benefits, including;
 - \$40 million lower U.S. tax expense in 2016 as a result of a change in planned repatriation, as we discuss below in “Changes in Revenues, Costs and Earnings – Income Taxes,” and
 - \$17 million related to excess tax benefits associated with the adoption of a new accounting standard related to share-based compensation, *offset by*
 - \$14 million income tax benefits in 2015 associated with the favorable resolution of prior years’ income tax items, and
 - \$7 million income tax benefits in 2015 from a decrease in state valuation allowances; and
- \$10 million higher investment gains in 2016 on dedicated assets in support of our executive retirement and deferred compensation plans, net of the increase in deferred compensation liability associated with the investments; **offset by**
- \$10 million higher net interest expense.

The decrease in losses of \$21 million (12%) in 2015 compared to 2014 was primarily due to:

- \$39 million higher income tax benefits, including;
 - \$18 million lower U.S. income tax expense in 2015 as a result of lower planned repatriation of current year earnings from certain non-U.S. subsidiaries,
 - \$14 million of income tax benefits in 2015 associated with the resolution of prior years’ income tax items, and
 - \$5 million higher income tax benefits from a decrease in state valuation allowances; **offset by**
- \$11 million lower investment gains in 2015 on dedicated assets in support of our executive retirement and deferred compensation plans, net of the decrease in deferred compensation liability associated with the investments.

ADJUSTED EARNINGS AND ADJUSTED EARNINGS PER SHARE

We prepare the consolidated financial statements in conformity with U.S. GAAP. However, management may use earnings and earnings per share adjusted to exclude certain items (adjusted earnings and adjusted earnings per share) 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 earnings per share when communicating our financial results and earnings outlook to analysts and investors. Adjusted earnings and adjusted earnings per share 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 Sempra Energy's and the California Utilities' 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 adjusted earnings and adjusted earnings per share to Sempra Energy Earnings and Diluted Earnings Per Common Share, which we consider to be the most directly comparable financial measures calculated in accordance with U.S. GAAP, for the years ended December 31, 2016, 2015 and 2014.

SEMPRA ENERGY ADJUSTED EARNINGS AND ADJUSTED EARNINGS PER SHARE

(Dollars in millions, except per share amounts)

	Pretax amount	Income tax expense (benefit) ⁽¹⁾	Noncontrolling interests	Earnings	Diluted EPS
Year ended December 31, 2016					
Sempra Energy GAAP Earnings				\$1,370	\$ 5.46
Excluded items:					
Remeasurement gain in connection with GdC	\$(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				\$1,267	\$ 5.05
Weighted-average number of shares outstanding, diluted (thousands)					251,155
Year ended December 31, 2015					
Sempra Energy GAAP Earnings				\$1,349	\$ 5.37
Excluded items:					
Gain on sale of Mesquite Power block 2	\$ (61)	\$ 25	\$ —	(36)	(0.14)
SONGS plant closure adjustment	(26)	11	—	(15)	(0.06)
Sempra Energy Adjusted Earnings				\$1,298	\$ 5.17
Weighted-average number of shares outstanding, diluted (thousands)					250,923
Year ended December 31, 2014					
Sempra Energy GAAP Earnings				\$1,161	\$ 4.63
Excluded item:					
SONGS plant closure loss ⁽²⁾	\$ 6	\$ 15	\$ —	21	0.08
Sempra Energy Adjusted Earnings				\$1,182	\$ 4.71
Weighted-average number of shares outstanding, diluted (thousands)					250,655

⁽¹⁾ Income taxes were calculated based on applicable statutory tax rates, except for adjustments that are solely income tax. Income taxes on the impairment of TdM were calculated based on the applicable statutory tax rate, including translation from historic to current exchange rates.

⁽²⁾ After including a \$17 million charge to reduce certain tax regulatory assets attributed to SONGS, the adjustment to loss from plant closure is a \$21 million charge to earnings.

The tables below reconcile adjusted earnings to SDG&E's and SoCalGas' Earnings, which we consider to be the most directly comparable financial measure calculated in accordance with U.S. GAAP, for the years ended December 31, 2016, 2015 and 2014. SoCalGas had no reconciling adjustments for the years ended December 31, 2015 or 2014.

SDG&E ADJUSTED EARNINGS

(Dollars in millions)

	Pretax amount	Income tax (benefit) expense ⁽¹⁾	Earnings
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			\$601
Year ended December 31, 2015			
SDG&E GAAP Earnings			\$587
Excluded item:			
SONGS plant closure adjustment	\$(26)	\$ 11	(15)
SDG&E Adjusted Earnings			\$572
Year ended December 31, 2014			
SDG&E GAAP Earnings			\$507
Excluded item:			
SONGS plant closure loss ⁽²⁾	\$ 6	\$ 15	21
SDG&E Adjusted Earnings			\$528

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

⁽²⁾ After including a \$17 million charge to reduce certain tax regulatory assets attributed to SONGS, the adjustment to loss from plant closure is a \$21 million charge to earnings.

SOCALGAS ADJUSTED EARNINGS

(Dollars in millions)

	Pretax amount	Income tax benefit ⁽¹⁾	Earnings
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			\$398

⁽¹⁾ Income taxes were calculated based on applicable statutory tax rates.

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 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 "Our Business" above.

- 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 is substantially recovered in rates, changes in these costs are reflected in the changes in revenues, and therefore do not impact earnings. In addition to the change 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 14 of the Notes to Consolidated Financial Statements.

The table below summarizes revenues and cost of sales for our utilities, net of intercompany activity:

	Years ended December 31,		
	2016	2015	2014
UTILITIES REVENUES AND COST OF SALES			
<i>(Dollars in millions)</i>			
Electric revenues:			
SDG&E	\$3,754	\$3,719	\$3,785
Sempra South American Utilities	1,463	1,447	1,434
Eliminations and adjustments	(6)	(8)	(10)
Total	5,211	5,158	5,209
Natural gas revenues:			
SoCalGas	3,471	3,489	3,855
SDG&E	499	500	544
Sempra Mexico	88	81	109
Sempra LNG & Midstream	68	103	113
Eliminations and adjustments	(76)	(77)	(72)
Total	4,050	4,096	4,549
Total utilities revenues	\$9,261	\$9,254	\$9,758
Cost of electric fuel and purchased power:			
SDG&E	\$1,187	\$1,151	\$1,309
Sempra South American Utilities	1,001	985	972
Total	\$2,188	\$2,136	\$2,281
Cost of natural gas:			
SoCalGas	\$ 891	\$ 921	\$1,449
SDG&E	127	153	208
Sempra Mexico	52	49	74
Sempra LNG & Midstream	17	31	44
Eliminations and adjustments	(20)	(20)	(17)
Total	\$1,067	\$1,134	\$1,758

The table below summarizes electric and natural gas volumes sold for our utilities:

UTILITIES VOLUMES			
<i>(Electric volumes in millions of kilowatt-hours, natural gas volumes in billion cubic feet)</i>			
	Years ended December 31,		
	2016	2015	2014
Electric volumes:			
SDG&E:			
Residential ⁽¹⁾	6,685	7,143	7,338
Commercial ⁽¹⁾	6,700	6,877	6,974
Industrial	2,189	2,161	2,067
Direct access	3,515	3,652	3,648
Street and highway lighting	75	83	88
Total ⁽⁴⁾	19,164	19,916	20,115
Sempra South American Utilities:			
Luz del Sur ⁽²⁾	7,387	7,549	7,287
Chilquinta Energía	2,900	2,887	2,944
Total	10,287	10,436	10,231
Natural gas volumes⁽³⁾:			
SDG&E:			
Natural gas sales	40	38	39
Transportation	31	35	34
Total ⁽⁴⁾	71	73	73
SoCalGas:			
Natural gas sales	294	291	287
Transportation	610	634	657
Total ⁽⁴⁾	904	925	944
Sempra Mexico – Ecogas			
	29	25	24

⁽¹⁾ Rooftop solar installations, weather and energy efficiency initiatives are impacting residential and commercial volumes sold by SDG&E. As of December 31, 2016, the residential and commercial rooftop solar capacity in SDG&E's territory totals 694 MW, an increase in capacity of 198 MW in 2016.

⁽²⁾ The decrease in electric volumes in 2016 is primarily due to the migration of regulated and non-regulated customers to tolling customers, who pay only a tolling fee and do not contribute to customer load.

⁽³⁾ In September 2016, Sempra LNG & Midstream completed the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas. Volume information for Mobile Gas and Willmut Gas has been excluded for all years presented due to immateriality.

⁽⁴⁾ Includes intercompany sales.

Electric Revenues and Cost of Electric Fuel and Purchased Power

Our electric revenues increased by \$53 million (1%), remaining at \$5.2 billion in 2016 primarily due to:

- \$35 million increase at SDG&E, including:
 - \$37 million higher authorized revenue in the 2016 GRC FD,
 - \$36 million higher cost of electric fuel and purchased power, which we discuss below,
 - \$31 million higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are fully offset in operation and maintenance expenses, and
 - \$5 million to adjust estimated 2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the CPUC 2016 GRC FD to actual deductions taken on the 2015 tax return. This amount reflects the increase in income tax expense, *offset by*
 - \$52 million of charges associated with prior years' income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD (\$37 million related to 2015 estimated benefits and \$15 million related to the true-up of 2012-2014 estimated benefits used in the 2016 GRC FD to actuals); and
- \$16 million increase at Sempra South American Utilities, including:
 - \$117 million due to higher rates at Luz del Sur and Chilquinta Energía primarily due to \$81 million of increased costs passed through to customers, *offset by*

- \$69 million due to foreign currency exchange rate effects,
- \$24 million lower volumes at Luz del Sur, net of the effects of higher revenues from the Santa Teresa hydroelectric power plant, which began commercial operations in September 2015, and
- \$9 million business interruption insurance proceeds in 2015.

In 2015 compared to 2014, our electric revenues decreased by \$51 million (1%) to \$5.2 billion primarily due to:

- \$66 million decrease at SDG&E, including:
 - \$158 million lower cost of electric fuel and purchased power, which we discuss below, and
 - \$57 million lower recovery of costs associated with CPUC-authorized refundable programs, which revenues are fully offset in operation and maintenance expenses, *offset by*
 - \$88 million higher revenues from CPUC-authorized 2015 attrition and, starting in 2015, authorized revenues for the recovery of the SONGS regulatory assets pursuant to an amended settlement agreement approved by the CPUC in 2014, which we discuss below in “Depreciation and Amortization” and in Note 13 of the Notes to Consolidated Financial Statements, and
 - \$52 million higher authorized revenues from electric transmission; **offset by**
- \$13 million increase at Sempra South American Utilities, including:
 - higher rates and volumes at Luz del Sur, offset by foreign currency effects, and
 - \$9 million business interruption insurance proceeds in 2015, *offset by*
 - foreign currency effects at Chilquinta Energía, offset by higher rates and volumes, and
 - lower revenues and volumes associated with the transfer of certain non-regulated customers from Chilquinta Energía to Tecnored, an energy-services subsidiary of Sempra South American Utilities. Our energy-service

companies are part of our energy-related businesses, which revenues are discussed below in “Energy-Related Businesses: Revenues and Cost of Sales.”

Our utilities’ cost of electric fuel and purchased power increased by \$52 million (2%) to \$2.2 billion in 2016 due to:

- \$36 million increase at SDG&E, including:
 - an increase from the incremental purchase of renewable energy at higher prices, *offset by*
 - a decrease in cost of purchased power due to declining natural gas prices, and
 - a decrease in consumption due to increased rooftop solar installations, weather impacts and energy efficiency initiatives; and
- \$16 million increase at Sempra South American Utilities driven primarily by
 - \$81 million of increased costs passed through to customers, *offset by*
 - \$48 million due to foreign currency exchange rate effects, and
 - \$28 million lower volumes at Luz del Sur, net of the effects of increased costs at the Santa Teresa hydroelectric power plant.

Our utilities’ cost of electric fuel and purchased power decreased by \$145 million (6%) to \$2.1 billion in 2015 compared to 2014 primarily due to:

- \$158 million decrease at SDG&E, including:
 - a decrease in cost of purchased power due to declining natural gas prices, and
 - a decrease in consumption due to energy efficiency initiatives, including an increase in rooftop solar installations, *offset by*
 - an increase from the incremental purchase of renewable energy at higher prices; **offset by**
- \$13 million increase at Sempra South American Utilities driven primarily by higher rates and volumes at both Luz del Sur and Chilquinta Energía, offset by foreign currency exchange rate effects.

Natural Gas Revenues and Cost of Natural Gas

The table below summarizes 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 in the table below 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,		
	2016	2015	2014
SoCalGas	\$3.05	\$3.18	\$5.06
SDG&E	3.20	4.05	5.44

In 2016, our natural gas revenues decreased by \$46 million (1%), remaining at \$4.1 billion, and the cost of natural gas decreased by \$67 million (6%), remaining at \$1.1 billion. The decrease in natural gas revenues included

- \$35 million decrease at Sempra LNG & Midstream primarily due to the sale of Mobile Gas and Willmut Gas in September 2016;
- \$18 million decrease at SoCalGas, which included
 - \$83 million of charges associated with prior years' income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD (\$72 million related to estimated 2015 benefits and \$11 million related to the true-up of 2012-2014 estimated benefits used in the 2016 GRC FD to actuals),
 - \$30 million decrease in cost of natural gas sold, due to \$38 million from lower average prices offset by \$8 million from higher volume,
 - \$27 million charge associated with tracking the 2016 income tax benefit from certain flow-through items in relation to forecasted amounts in the 2016 GRC FD,
 - \$21 million lower regulatory awards, and
 - \$19 million increase in 2015 from a CPUC-approved retroactive increase in authorized GRC revenue requirement for years 2012 through 2014 due to increased rate base, *offset by*
 - \$56 million higher revenues primarily associated with the PSEP and advanced metering assets,
 - \$52 million higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are fully offset in operation and maintenance expenses,
 - \$49 million higher authorized revenue in the 2016 GRC FD, and
 - \$19 million to adjust estimated 2015 income tax benefits generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the CPUC 2016 GRC FD to actual deductions taken on the 2015 tax return. This amount reflects the increase in income tax expense; and

- \$1 million decrease at SDG&E, which included
 - \$26 million decrease in cost of natural gas sold, due to \$34 million from lower average prices offset by \$8 million from higher volume, *offset by*
 - \$9 million higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are fully offset in operation and maintenance expenses, and
 - \$8 million higher revenues primarily associated with the PSEP.

In 2015 compared to 2014, our natural gas revenues decreased by \$453 million (10%) to \$4.1 billion, and the cost of natural gas decreased by \$624 million (35%) to \$1.1 billion. The decrease in natural gas revenues included

- \$366 million decrease at SoCalGas, which included
 - \$528 million decrease in cost of natural gas sold, due to \$543 million from lower average prices offset by \$15 million from higher sales volumes driven mainly by cooler weather in 2015, *offset by*
 - \$57 million higher revenues from CPUC-authorized 2015 attrition,
 - \$45 million higher recovery of costs associated with CPUC-authorized refundable programs, which revenues are fully offset in operation and maintenance expenses,
 - \$19 million increase from a retroactive increase, approved by the CPUC in 2015, in authorized GRC revenue requirement for years 2012 through 2014 due to increased rate base, and
 - \$13 million higher regulatory awards;
- \$44 million decrease at SDG&E, which included
 - \$55 million decrease in cost of natural gas sold, primarily due to \$52 million from lower average prices, *offset by*
 - \$8 million higher revenues from CPUC-authorized 2015 attrition; and
 - \$28 million lower revenues at Sempra Mexico primarily due to foreign currency effects and lower natural gas prices at Ecogas.

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			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
REVENUES			
Sempra South American Utilities	\$ 93	\$ 97	\$ 100
Sempra Mexico	637	588	709
Sempra Renewables	34	36	35
Sempra LNG & Midstream	440	550	866
Intersegment revenues, eliminations and adjustments ⁽¹⁾	(282)	(294)	(433)
Total revenues	\$ 922	\$ 977	\$1,277
COST OF SALES⁽²⁾			
Cost of natural gas, electric fuel and purchased power:			
Sempra South American Utilities	\$ 13	\$ 22	\$ 11
Sempra Mexico	200	221	350
Sempra LNG & Midstream	337	375	617
Eliminations and adjustments ⁽¹⁾	(273)	(283)	(426)
Total	\$ 277	\$ 335	\$ 552
Other cost of sales:			
Sempra South American Utilities	\$ 69	\$ 64	\$ 68
Sempra Mexico	10	15	14
Sempra LNG & Midstream	251	79	89
Eliminations and adjustments ⁽¹⁾	(8)	(10)	(8)
Total	\$ 322	\$ 148	\$ 163

⁽¹⁾ Includes eliminations of intercompany activity.

⁽²⁾ Excludes depreciation and amortization, which are shown separately on the Consolidated Statements of Operations.

Revenues from our energy-related businesses decreased by \$55 million (6%) to \$922 million in 2016. The decrease included

- \$110 million decrease at Sempra LNG & Midstream, which included
 - \$63 million primarily driven by changes in natural gas prices and lower volumes,
 - \$34 million lower power revenues due to the sale of the second block of Mesquite Power in April 2015, and
 - \$13 million from lower natural gas sales to Sempra Mexico; **offset by**
- \$49 million higher revenues at Sempra Mexico primarily due to:
 - \$82 million due to the acquisition of the remaining 50-percent interest in GdC in September 2016, *offset by*
 - \$30 million lower power volumes at the TdM power plant; and
- \$12 million primarily from lower intercompany eliminations associated with sales between Sempra LNG & Midstream and Sempra Mexico.

In 2015 compared to 2014, revenues from our energy-related businesses decreased by \$300 million (23%) to \$977 million. The decrease included

- \$316 million decrease at Sempra LNG & Midstream mainly from lower natural gas prices and volumes and lower power revenues due to the sale of the remaining block of Mesquite Power and a related power sale contract in April 2015, as well as from the deconsolidation of Cameron LNG, LLC as of October 1, 2014;
- \$121 million lower revenues at Sempra Mexico primarily due to lower natural gas prices and volumes in its gas business and lower power prices and volumes and capacity revenues in its power business, offset by higher transportation revenues from a section of the Sonora natural gas pipeline that commenced operations in the fourth quarter of 2014; and
- \$3 million decrease at Sempra South American Utilities primarily due to foreign currency effects, offset by higher revenues associated with the transfer of certain non-regulated customers from Chilquinta Energía. Those revenues were included in “Electric Revenues” in prior years; **offset by**

- \$139 million primarily from lower 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 decreased by \$58 million (17%) to \$277 million in 2016 primarily due to:

- \$38 million decrease at Sempra LNG & Midstream primarily due to lower natural gas costs and lower electric fuel costs due to the sale of the remaining block of Mesquite Power in April 2015; and
- \$21 million decrease at Sempra Mexico primarily due to lower natural gas volumes and costs; **offset by**
- \$10 million primarily from lower intercompany eliminations of costs 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 decreased by \$217 million (39%) to \$335 million in 2015 compared to 2014 primarily due to:

- \$242 million decrease at Sempra LNG & Midstream primarily due to lower natural gas costs and volumes and lower electric fuel costs due to the sale of the remaining block of Mesquite Power in April 2015; and
- \$129 million decrease at Sempra Mexico primarily due to lower natural gas costs and volumes; **offset by**
- \$143 million primarily from lower intercompany eliminations of costs associated with sales between Sempra LNG & Midstream and Sempra Mexico.

Other cost of sales increased by \$174 million to \$322 million in 2016 primarily due to the \$206 million charge related to Sempra LNG & Midstream's permanent release of pipeline capacity in the second quarter of 2016, offset by \$33 million of capacity costs in 2015 on the Rockies Express pipeline.

Operation and Maintenance

In the table below, we provide a breakdown of our operation and maintenance expenses by segment.

OPERATION AND MAINTENANCE (Dollars in millions)	Years ended December 31,		
	2016	2015	2014
Sempra Utilities:			
SDG&E	\$1,048	\$1,017	\$1,076
SoCalGas	1,385	1,361	1,321
Sempra South American Utilities	172	160	173
Sempra Infrastructure:			
Sempra Mexico	150	126	121
Sempra Renewables	54	50	50
Sempra LNG & Midstream	156	177	181
Parent and other ⁽¹⁾	5	(5)	13
Total operation and maintenance	\$2,970	\$2,886	\$2,935

⁽¹⁾ Includes intercompany eliminations recorded in consolidation.

Our operation and maintenance expenses increased by \$84 million (3%) to \$3.0 billion in 2016 primarily due to:

- \$31 million increase at SDG&E, which included
 - \$40 million higher expenses associated with CPUC-authorized refundable programs, for which all costs incurred are fully recovered in revenue (refundable program expenses), and
 - \$10 million at Otay Mesa VIE primarily due to major maintenance at the Otay Mesa Energy Center (OMEC) plant in the second quarter of 2016, *offset by*
 - \$14 million lower litigation expense, and
 - \$8 million lower non-refundable operating costs, including labor, contract services and administrative and support costs;

- \$24 million increase at SoCalGas, which included
 - \$52 million higher expenses associated with CPUC-authorized refundable programs, for which all costs incurred are fully recovered in revenue (refundable program expenses), *offset by*
 - \$33 million lower non-refundable operating costs, including labor, contract services and administrative and support costs; and
- \$24 million increase at Sempra Mexico primarily from \$17 million higher operating costs due to the acquisition of the remaining 50-percent interest in GdC in September 2016; **offset by**

- \$21 million decrease at Sempra LNG & Midstream, \$9 million of which is attributable to the sale of EnergySouth in September 2016.

Our operation and maintenance expenses decreased by \$49 million (2%), remaining at \$2.9 billion in 2015 compared to 2014 primarily due to:

- \$59 million decrease at SDG&E, which included
 - \$53 million lower expenses associated with CPUC-authorized refundable programs, for which all costs incurred are fully recovered in revenue (refundable program expenses), and
 - \$8 million lower non-refundable operating costs, including \$11 million lower major maintenance costs at its electric generating facilities, as well as labor, contract services and administrative and support costs; and
- \$18 million decrease at Parent and Other primarily due to lower employee benefit and deferred compensation costs; **offset by**
- \$40 million increase at SoCalGas primarily due to \$45 million higher expenses associated with CPUC-authorized refundable programs for which all costs incurred are fully recovered in revenue (refundable program expenses).

Depreciation and Amortization

Our depreciation and amortization expense was

- \$1,312 million in 2016
- \$1,250 million in 2015
- \$1,156 million in 2014

The increase of \$62 million (5%) in 2016 was primarily due to:

- \$42 million increase at SDG&E from depreciation on higher utility plant base, higher depreciation at Otay Mesa VIE and higher amortization; and
- \$15 million higher depreciation at SoCalGas from higher utility plant base.

The increase of \$94 million (8%) in 2015 compared to 2014 was primarily due to:

- \$74 million higher depreciation and amortization at SDG&E mainly from \$42 million from the start of amortization of SONGS regulatory assets and from higher utility plant base. As we discuss in Note 13 of the Notes to Consolidated Financial Statements, based on an amended settlement agreement approved by the CPUC in 2014, SDG&E is authorized to recover in rates its remaining

investment in SONGS, including base plant and construction work in progress; and

- \$30 million higher depreciation at SoCalGas from higher utility plant base; **offset by**
- \$12 million lower depreciation expense at Sempra LNG & Midstream primarily due to the deconsolidation of Cameron LNG, LLC as of October 1, 2014.

Impairment Losses

In 2016, Sempra Mexico reduced the carrying value of TdM by recognizing a noncash impairment charge of \$131 million. We discuss deferred income tax impacts related to TdM and this impairment in Note 3 of the Notes to Consolidated Financial Statements. Also in 2016, SoCalGas recorded a \$21 million impairment of assets related to the Southern Gas System Reliability project.

Plant Closure Adjustment (Loss)

In 2015, SDG&E recorded a \$26 million pretax reduction to the loss from SONGS plant closure. In 2014, SDG&E recorded a \$6 million pretax charge to adjust the total loss from plant closure. We discuss SONGS further in Notes 13 and 15 of the Notes to Consolidated Financial Statements.

Gain on Sale of Assets

Gain on sale of assets includes, in 2016, \$130 million from the sale of EnergySouth, and in 2015, \$61 million from the sale of the remaining 625-MW block of the Mesquite Power plant and a related power sale contract, and \$8 million from the sale of the Rosamond Solar development project.

Also included in this line item are gains on the sale of 50-percent equity interests in 2014 as follows:

- \$27 million for Copper Mountain Solar 3
- \$19 million for the first phase of the Energía Sierra Juárez Wind project
- \$14 million for the Broken Bow 2 Wind project

Equity Earnings, Before Income Tax

Equity earnings from our equity method investments were

- \$6 million in 2016
- \$104 million in 2015
- \$81 million in 2014

The decrease of \$98 million in equity earnings in 2016 was primarily due to a \$44 million impairment charge related to Rockies Express in the first quarter of 2016, and \$61 million lower equity earnings as a result of the sale of our 25-percent interest in Rockies Express in May 2016.

The increase of \$23 million in equity earnings in 2015 compared to 2014 was primarily due to:

- \$19 million higher equity earnings from Rockies Express mainly due to east-to-west capacity placed in service in 2015; and
- \$4 million higher earnings at Sempra Renewables due to higher earnings from increased solar capacity, offset by lower earnings from decreased production at wind projects.

We provide further details about equity method investments in Note 4 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 GdC. We discuss the transaction further in Notes 3 and 10 of the Notes to Consolidated Financial Statements.

Other Income, Net

Other income, net, was

- \$132 million in 2016
- \$126 million in 2015
- \$137 million in 2014

Other income, net, includes equity-related AFUDC at the California Utilities and regulated entities at Sempra Mexico and Sempra LNG & Midstream; interest on regulatory balancing accounts; gains and losses from our investments and interest rate swaps; foreign currency transaction gains and losses; electrical infrastructure relocation income in Peru; and other, sundry amounts. The investment activity is on dedicated assets in support of certain executive benefit plans, as we discuss in Note 7 of the Notes to Consolidated Financial Statements.

Other income, net, increased by \$6 million (5%) to \$132 million in 2016 and included the following activity:

- \$20 million higher investment gains in 2016 on dedicated assets in support of our executive retirement and deferred compensation plans;
- \$9 million increase in equity-related AFUDC, including
 - \$9 million increase at SDG&E, and
 - \$4 million increase at SoCalGas, *offset by*
 - \$6 million decrease at Sempra Mexico; and
- \$6 million lower foreign currency losses in 2016; **offset by**
- \$28 million higher losses on interest rate and foreign exchange instruments in 2016; and
- \$6 million lower income from the sale of other investments.

In 2015 compared to 2014, other income, net, decreased by \$11 million (8%) and included the following activity:

- \$24 million lower investment gains in 2015 on dedicated assets in support of our executive retirement and deferred compensation plans; and
- \$14 million lower electrical infrastructure income in Peru; **offset by**
- \$11 million lower net losses on interest rate and foreign exchange instruments in 2015;
- \$9 million higher income from the sale of other investments;
- \$8 million lower foreign currency losses in 2015; and
- \$1 million increase in equity-related AFUDC, including
 - \$10 million increase at SoCalGas, *offset by*
 - \$10 million decrease at Sempra Mexico related to construction of the Sonora natural gas pipeline.

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

Interest Expense

Interest expense was

- \$553 million in 2016
- \$561 million in 2015
- \$554 million in 2014

The decrease of \$8 million (1%) in 2016 was primarily due to:

- \$26 million higher capitalized interest primarily due to:
 - \$18 million increase at Sempra Renewables primarily for solar projects, and
 - \$10 million increase at Sempra Mexico primarily for the Ojinaga and San Isidro pipeline projects; **offset by**
- \$13 million increase at SoCalGas primarily due to debt issuances in 2015 and 2016; and
- \$6 million higher lease interest on our downtown headquarters building.

The increase of \$7 million (1%) in 2015 compared to 2014 was primarily due to:

- \$24 million increase in long-term debt interest at Parent and Other primarily due to debt issuances in 2014 and 2015, net of maturities; and
- \$15 million increase at SoCalGas primarily due to debt issuances in 2014 and 2015; **offset by**
- \$33 million increase in capitalized interest at Sempra LNG & Midstream primarily related to its investment in Cameron LNG JV, which has not commenced its planned principal operations.

Income Taxes

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

INCOME TAX EXPENSE AND EFFECTIVE INCOME TAX RATES						
<i>(Dollars in millions)</i>						
	Years ended December 31,					
	2016		2015		2014	
	Income tax expense	Effective income tax rate	Income tax expense	Effective income tax rate	Income tax expense	Effective income tax rate
Sempra Energy Consolidated	\$389	21%	\$341	20%	\$300	20%
SDG&E	280	33	284	32	270	34
SoCalGas	143	29	138	25	139	29

Sempra Energy Consolidated

Sempra Energy's income tax expense increased in 2016 due to higher pretax income and a higher effective income tax rate. The higher effective income tax rate was primarily due to:

- \$3 million income tax expense in 2016 compared to \$56 million income tax benefit in 2015 from the resolution of prior years' income tax items. The amount in 2016 includes \$14 million income tax expense from lower actual repairs deductions at SDG&E and SoCalGas taken on the 2015 tax return compared to amounts estimated in 2015, as discussed in Note 14 of the Notes to Consolidated Financial Statements; and
- \$17 million income tax expense from the remeasurement of our Peruvian deferred income tax balances as a result of tax reform in Peru as discussed below; **offset by**
- \$34 million income tax benefit associated with the adoption of a new accounting standard related to share-based compensation; and
- \$40 million lower U.S. income tax expense as a result of a change in planned repatriation from certain non-U.S. subsidiaries, as discussed below and in Note 6 of the Notes to Consolidated Financial Statements.

Sempra Energy's income tax expense increased in 2015 compared to 2014 due to higher pretax income. The effective income tax rate remained the same in 2015. However, the effective income tax rate was affected by:

- \$21 million higher favorable resolution of prior years' income tax items including settlement with the California Franchise Tax Board in 2015;
- \$20 million U.S. income tax expense in 2015 on the planned repatriation from certain non-U.S. subsidiaries, compared to \$38 million in 2014, as discussed below; and
- \$17 million charge in 2014 to reduce certain tax regulatory assets attributed to SDG&E's investment in SONGS, as we discuss in Note 13 of the Notes to Consolidated Financial Statements; **offset by**

- \$25 million tax benefit in 2014 due to the release of Louisiana state valuation allowance against a deferred tax asset associated with Cameron LNG developments.

We report as part of our pretax results the income or loss attributable to noncontrolling interests. However, we do not record income taxes for a portion of this income or loss, as some of our entities with noncontrolling interests 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 noncontrolling interests grow, and as we may continue to invest in such entities, the impact on our effective income tax rate may become more significant.

Based on the current tax law, we anticipate that Sempra Energy's effective income tax rate will be approximately 28 percent in 2017 compared to 21 percent in 2016. In the years 2018 through 2021, based on current tax law, we anticipate that Sempra Energy's effective income tax rate will range from 29 percent to 33 percent. The effective income tax rate in 2016 was impacted by significant items that could not be reliably forecasted. However, the income tax effects of items that cannot be reliably forecasted are not factored into these 2017-2021 forecasted effective tax rates. The increase in the forecasted effective income tax rates is primarily due to a forecasted increase in pretax income without a proportional increase in the forecasted flow-through deductions at the California Utilities. Flow-through deductions are subject to review by the CPUC and, at the CPUC's discretion, the flow-through benefits of these items could be changed, which could have a material adverse impact on Sempra Energy's and the California Utilities' earnings, financial condition and cash flow. We discuss the items that are subject to flow-through treatment at the California Utilities in Note 6 of the Notes to Consolidated Financial Statements.

SDG&E

SDG&E's income tax expense decreased in 2016 due to lower pretax income, offset by a higher effective income tax rate. The higher effective income tax rate was primarily due to:

- \$11 million lower income tax benefit in 2016 from the resolution of prior years' income tax items, including \$3 million income tax expense in 2016 from lower actual repairs deductions taken on the 2015 tax return compared to amounts estimated in 2015; **offset by**
- \$7 million income tax benefit associated with the adoption of a new accounting standard related to share-based compensation.

SDG&E's income tax expense increased in 2015 compared to 2014 due to higher pretax income, offset by a lower effective income tax rate, primarily from the \$17 million charge in 2014 to reduce certain tax regulatory assets attributed to SDG&E's investment in SONGS.

Based on the current tax law, we anticipate that SDG&E's effective income tax rate will be approximately 37 percent in 2017 compared to 33 percent in 2016. In the years 2018 through 2021, based on current tax law, we anticipate that SDG&E's effective income tax rate will range from 37 percent to 38 percent. The effective income tax rate in 2016 was impacted by significant items that could not be reliably forecasted. However, the income tax effects of items that cannot be reliably forecasted are not factored into these forecasted 2017-2021 effective tax rates. The increase in the forecasted effective income tax rates is primarily due to a forecasted increase in pretax income without a proportional increase in the forecasted flow-through deductions.

SoCalGas

SoCalGas' income tax expense increased in 2016 due to a higher effective income tax rate, offset by lower pretax income. The higher effective income tax rate was primarily due to:

- \$10 million income tax expense in 2016 compared to \$18 million income tax benefit in 2015 from the resolution of prior years' income tax items. The amount in 2016 includes \$11 million income tax expense from lower actual repairs deductions taken on the 2015 tax return compared to amounts estimated in 2015; **offset by**
- \$4 million income tax benefit associated with the adoption of a new accounting standard related to share-based compensation.

SoCalGas' income tax expense decreased slightly in 2015 compared to 2014 due to a lower effective income tax rate,

offset by higher pretax income. The lower effective income tax rate was primarily due to:

- \$10 million higher favorable resolution of prior years' income tax items in 2015;
- higher deductions for certain repairs expenditures that are capitalized for financial statement purposes; and
- higher deductions for self-developed software expenditures.

Based on the current tax law, we anticipate that SoCalGas' effective income tax rate will be approximately 33 percent in 2017 compared to 29 percent in 2016. In the years 2018 through 2021, based on current tax law, we anticipate that SoCalGas' effective income tax rate will range from 31 percent to 33 percent. The effective income tax rate in 2016 was impacted by significant items that could not be reliably forecasted. However, the income tax effects of items that cannot be reliably forecasted are not factored into these 2017-2021 forecasted effective tax rates. The increase in the forecasted effective income tax rates is primarily due to a forecasted increase in pretax income without a proportional increase in the forecasted flow-through deductions.

Tax Legislation

United States. Due to bonus depreciation, Sempra Energy, SDG&E and SoCalGas have U.S. federal net operating loss (NOL) carryforwards. Based on current projections, Sempra Energy, SDG&E and SoCalGas do not expect any of their NOL or income tax credits to expire prior to the end of the carryforward period, as allowed under current U.S. federal income tax law. We discuss our NOLs and tax credit carryforwards further in Note 6 of the Notes to Consolidated Financial Statements and potential U.S. federal tax reform in "Factors Influencing Future Performance."

Peru. On December 10, 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 imposes 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. We do not expect a material impact as a result of the decrease to the dividend withholding tax rate.

Pursuant to tax reform legislation passed in 2014, we recorded an \$18 million tax benefit in 2014 for remeasurement of our Peruvian tax balances.

Chile. Pursuant to tax reform legislation passed in 2014, we recorded an additional \$6 million of income tax expense in 2014 for remeasurement of our Chilean deferred tax balances.

Repatriation of Foreign Earnings

We no longer plan to repatriate undistributed non-U.S. earnings and accordingly, in 2016, we reversed \$20 million of U.S. income tax expense accrued on these earnings in 2015. We intend to indefinitely reinvest cumulative undistributed earnings from all of our non-U.S. subsidiaries and non-U.S. corporate joint ventures and use such earnings to support non-U.S. operations. Therefore, we do not intend to use these cumulative undistributed earnings as a source of funding for U.S. operations. In 2014, we made distributions of approximately \$288 million from our non-U.S. subsidiaries, \$100 million of which was from previously taxed income and therefore not subject to additional U.S. federal income tax.

Equity Earnings, Net of Income Tax

Equity earnings of unconsolidated subsidiaries, net of income tax, which are all from Sempra South American Utilities' and Sempra Mexico's equity method investments, were

- \$78 million in 2016
- \$85 million in 2015
- \$38 million in 2014

The decrease of \$7 million in 2016 was primarily due to IEnova's acquisition of the remaining 50-percent interest in GdC, increasing IEnova's ownership in GdC to 100 percent, offset by higher equity earnings at the Eletrans joint venture.

The increase of \$47 million in 2015 compared to 2014 was primarily due to:

- start of operations in December 2014 of the Los Ramones I pipeline;
- higher earnings from the Energía Sierra Juárez wind-powered electric generation facility commencing operations in the second quarter of 2015; and
- equity-related AFUDC for the Los Ramones Norte pipeline project.

Earnings Attributable to Noncontrolling Interests

Earnings attributable to noncontrolling interests were \$148 million for 2016 compared to \$98 million for 2015.

The net change of \$50 million included

- \$80 million at Sempra Mexico, primarily due to:
 - \$82 million gain associated with the remeasurement of our 50-percent equity interest in GdC, and
 - \$14 million due to the decrease in our controlling interest from 81.1 percent to 66.4 percent following IEnova's equity offerings in October 2016, *offset by*
 - \$21 million impairment of TdM assets held for sale; **offset by**
- \$24 million decrease at SDG&E, primarily due to an increase in operating expenses as a result of major maintenance at the OMEC plant in the second quarter of 2016.

Earnings attributable to noncontrolling interests were \$98 million for 2015 compared to \$100 million for 2014. The net change of \$2 million included

- \$7 million decrease in earnings attributable to noncontrolling interests at Sempra South American Utilities, before adjustments for the effects of foreign currency translation; **offset by**
- \$6 million increase in earnings attributable to noncontrolling interests of IEnova in 2015.

TRANSACTIONS WITH AFFILIATES

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

BOOK VALUE PER SHARE

Sempra Energy's book value per share on the last day of each year was

- \$51.77 in 2016
- \$47.56 in 2015
- \$45.98 in 2014

The increases in 2016 and 2015 were primarily the result of comprehensive income exceeding dividends. In 2016, the increase was also attributable to IEnova's follow-on equity offerings and a cumulative-effect adjustment to retained earnings for previously unrecognized excess tax benefits from share-based compensation.

IMPACT OF FOREIGN CURRENCY AND INFLATION RATES ON RESULTS OF OPERATIONS

Foreign Currency Translation

Our operations in South America and our natural gas distribution utility in Mexico use their local currency as their functional currency. The assets and liabilities of these 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 reporting period. The resulting noncash translation adjustments do not enter into the calculation of

earnings or retained earnings, but are reflected in Other Comprehensive Income (Loss) (OCI) and in Accumulated Other Comprehensive Income (Loss) (AOCI). However, 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 impacted our comparative reported results as follows:

TRANSLATION IMPACT FROM CHANGE IN AVERAGE FOREIGN CURRENCY EXCHANGE RATES

(Dollars in millions)

	2016 compared to 2015	2015 compared to 2014
Lower earnings from foreign currency translation:		
Sempra South American Utilities	\$ 8	\$18
Sempra Mexico – Ecogas	2	2
Total	\$10	\$20

Transactional Impacts

Some income statement activities at our foreign operations and their joint ventures 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 (losses) gains included in reported amounts		
	Years ended December 31,					
	2016	2015	2014	2016	2015	2014
Other income, net	\$ 132	\$ 126	\$ 137	\$(33)	\$(11)	\$(30)
Income tax expense	389	341	300	38	43	44
Equity earnings, net of income tax	78	85	38	23	17	2
Earnings	1,370	1,349	1,161	25	40	12

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 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. 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 and Equity Earnings, Net of Income Tax. We utilize short-term 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 our Mexican subsidiaries and joint ventures (DEN, Energía Sierra Juárez and Infraestructura Marina del Golfo) 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, Net of Income Tax, for our joint ventures (including GdC until September 26, 2016).

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 GdC and Los Ramones Norte within our DEN joint venture) 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 are included in Revenues: Energy-Related Businesses or Equity Earnings, Net of Income Tax. The activity of foreign currency forwards and swaps related to these contracts settle through Revenues: Energy-Related Businesses or Equity Earnings, Net of Income Tax.

Our joint ventures in Chile (Eletrans S.A. and Eletrans II S.A., collectively Eletrans) use the U.S. dollar as the functional currency, but have certain construction commitments that are denominated in the Chilean Unidad de Fomento (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, ending in 2018, with activity recorded in Equity Earnings, Net of Income Tax.

CAPITAL RESOURCES AND LIQUIDITY

OVERVIEW

We expect our cash flows from operations to fund a substantial portion of our capital expenditures and dividends.

We may also meet our cash requirements through borrowings under our credit facilities, issuances of securities, distributions from our equity method investments, project financing and equity sales, including tax equity.

Sempra Energy Consolidated cash and cash equivalents decreased by \$54 million in 2016 to \$349 million at December 31, 2016. Cash flows from operations for 2016 were \$2.3 billion. Significant sources (uses) of cash from investing and financing activity that affected capital resources, liquidity and cash flows in 2016 included

Sources of cash:

- \$3 billion issuances of debt with maturities greater than 90 days, including \$498 million at SDG&E and \$499 million at SoCalGas
- \$1.2 billion proceeds received from the IEnova follow-on common stock offerings, net of offering costs and Sempra Energy's participation
- \$692 million net increase in short-term debt
- \$761 million net proceeds from Sempra LNG & Midstream's sale of EnergySouth and its 25-percent interest in Rockies Express
- \$474 million net proceeds from tax equity funding from certain wind and solar power generation projects at Sempra Renewables
- \$100 million withdrawals from the Nuclear Decommissioning Trust assets at SDG&E for SONGS decommissioning costs. We discuss the Nuclear Decommissioning Trusts further in Note 13 of the Notes to Consolidated Financial Statements

Uses of cash:

- \$4.2 billion in expenditures for property, plant and equipment (PP&E), including \$1.4 billion at SDG&E and \$1.3 billion at SoCalGas
- \$2.1 billion retirements and repayments of debt with maturities greater than 90 days, including \$204 million at SDG&E and \$3 million at SoCalGas
- \$1.6 billion for investments in and acquisitions of businesses
- \$686 million common dividends paid

We discuss these events in more detail later in this section.

Our lines of credit provide liquidity and support commercial paper. As we discuss in Note 5 of the Notes to Consolidated Financial Statements, Sempra Energy, Sempra Global (the holding company for our subsidiaries not subject to California utility regulation) 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, 2016. Our foreign operations have additional general purpose credit facilities aggregating \$1.7 billion, with \$1 billion available unused credit at December 31, 2016.

AVAILABLE FUNDS AT DECEMBER 31, 2016

(Dollars in millions)

	Sempra Energy Consolidated	SDG&E	SoCalGas
Unrestricted cash and cash equivalents ⁽¹⁾	\$ 349	\$ 8	\$ 12
Available unused credit ⁽²⁾	3,027	750	688

⁽¹⁾ Amounts at Sempra Energy Consolidated include \$228 million held in non-U.S. jurisdictions that are unavailable to fund U.S. operations unless repatriated, as we discuss below.

⁽²⁾ Available unused credit is the total available on the Sempra Energy, Sempra Global and the California Utilities' credit facilities. 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.

Sempra Energy Consolidated

We believe that these available funds, combined with cash flows from operations, distributions from equity method investments, proceeds of securities issuances, project financing, equity sales (including tax equity) and partnering in joint ventures will be adequate to fund operations, including to:

- finance capital expenditures
- meet liquidity requirements
- fund shareholder dividends
- fund new business acquisitions or start-ups
- repay maturing long-term debt
- 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 could 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 at Sempra Infrastructure. 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 Infrastructure businesses before we would reduce funds necessary for the ongoing needs of our utilities. We monitor our ability to finance the needs of our operating, investing and financing activities in a manner consistent with our intention to maintain strong, investment-grade credit ratings and capital structure.

At December 31, 2016 and 2015, our cash and cash equivalents held in non-U.S. jurisdictions that were unavailable to fund U.S. operations unless repatriated were \$228 million and \$301 million, respectively. We discuss repatriation in "Results of Operations – Changes in Revenues, Costs and Earnings – Income Taxes" above.

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 may, along with a number of other factors such as changes to discount rates, assumed rates of returns, mortality tables, and regulations, impact funding requirements for pension and other postretirement benefit plans and SDG&E's nuclear decommissioning trusts. At the California Utilities, funding requirements are generally recoverable in rates. In 2016, sale and purchase activities in our Nuclear Decommissioning Trust increased significantly compared to prior years as a result of a change to our asset mix intended to reduce the overall risk profile of the trust. We discuss our employee benefit plans and SDG&E's nuclear decommissioning trusts, including our investment allocation strategies for assets in these trusts, in Notes 7 and 13, respectively, of the Notes to Consolidated Financial Statements.

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

Short-Term Borrowings

Our short-term debt is primarily used to meet liquidity requirements, fund shareholder dividends, and temporarily

finance capital expenditures and new business acquisitions or start-ups. Our corporate short-term, unsecured promissory notes, or commercial paper, were our primary sources of

short-term debt funding in 2016. At our California Utilities, short-term debt is used primarily to meet working capital needs.

The following table shows selected statistics for our commercial paper borrowings for 2016:

COMMERCIAL PAPER STATISTICS			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated	SDG&E	SoCalGas
Amount outstanding at December 31, 2016	\$1,243	\$ —	\$ 62
Weighted average interest rate at December 31, 2016	1.107%	—%	0.75%
Maximum month-end amount outstanding during 2016 ⁽¹⁾	\$2,309	\$ 244	\$ 255
Monthly weighted average amount outstanding during 2016	\$1,344	\$ 95	\$ 36
Monthly weighted average interest rate during 2016	0.997%	1.029%	0.497%

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

Loans to Affiliates

At December 31, 2016, Sempra Energy has provided loans to unconsolidated affiliates totaling \$227 million, which we discuss in Note 1 of the Notes to Consolidated Financial Statements.

California Utilities

SDG&E and SoCalGas expect that available funds, cash flows from operations and debt issuances will continue to be adequate to meet their working capital and capital expenditure requirements.

Changes in balancing accounts for significant costs at SDG&E and SoCalGas, particularly a change in status between over- and under- collected, 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 uses the Energy Resource Recovery Account (ERRA) balancing account to record the net of its actual cost incurred for electric fuel and purchased power. SDG&E's ERRA balance was undercollected by \$25 million at December 31, 2016 and overcollected by \$25 million at December 31, 2015. During 2016, the ERRA undercollected balance was primarily caused by actual volumes being lower than authorized sales in 2016.

SoCalGas and SDG&E use the Core Fixed Cost Account (CFCA) balancing account to record the difference between the authorized margin and other costs allocated to core customers. Because warmer weather experienced in 2015 and 2016 resulted in lower natural gas consumption compared to authorized levels, SoCalGas' CFCA balance was undercollected by \$114 million at December 31, 2016 and \$328 million at December 31, 2015. SDG&E's CFCA balance was undercollected by \$66 million at December 31, 2016 and \$105 million at December 31, 2015.

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

SoCalGas

Aliso Canyon Natural Gas Storage Facility Gas Leak

We provide information on the natural gas leak at the Aliso Canyon storage facility in Note 15 of the Notes to Consolidated Financial Statements, in "Factors Influencing Future Performance" below and in "Risk Factors" in our 2016 Annual Report on Form 10-K. 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), or if there were to be significant delays in receiving insurance recoveries, such costs 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 results of operations, cash flows, and financial condition.

The total 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), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Sempra South American Utilities

We expect working capital and capital expenditure requirements, projects, joint venture investments, and loans to affiliates at Chilquinta Energía and Luz del Sur and dividends at Luz del Sur to be funded by available funds, funds internally generated by those businesses, issuances of corporate bonds and other external borrowings.

Sempra Mexico

We expect working capital and capital expenditure requirements, projects, joint venture investments and dividends in Mexico to be funded by available funds, including credit facilities, and funds internally generated by the Mexico businesses, securities issuances, project financing, interim funding from the parent or affiliates, and partnering in joint ventures.

Sempra Mexico also expects to generate cash from the sale of its 625-MW natural gas-fired TdM power plant located in Mexicali, Baja California, Mexico. As we discuss in Note 3 of the Notes to Consolidated Financial Statements, in February 2016, management approved a plan to market and sell the TdM plant, and we continue to actively pursue its sale. TdM had a net book value of \$154 million (including associated assets and liabilities) at December 31, 2016.

In 2016, 2015 and 2014, IEnova paid dividends of \$26 million, \$32 million and \$31 million, respectively, to its minority shareholders.

Sempra Renewables

We expect Sempra Renewables to require funds for the development of and investment in electric renewable energy projects. Projects at Sempra Renewables may be financed through a combination of operating cash flow, project financing, funds from the parent, partnering in joint ventures, and other forms of equity sales, including tax equity. The varying costs and structure of these alternative financing sources impact the projects' returns and their earnings profile.

Sempra LNG & Midstream

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

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 a joint venture agreement. 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 \$3.9 billion. The project financing and guarantees became effective on October 1, 2014, the effective date of the joint venture formation. The guarantees will terminate upon satisfaction of certain conditions, including all three trains achieving commercial operation and meeting certain operational performance tests. The guarantees are anticipated to be terminated approximately nine months after all three trains achieve commercial operation.

We discuss Cameron LNG JV and the joint venture financing further in "Factors Influencing Future Performance – Sempra LNG & Midstream – Cameron LNG JV Three-Train Liquefaction Project" below, in Notes 3 and 4 of the Notes to Consolidated Financial Statements and in "Risk Factors" in our 2016 Annual Report on Form 10-K.

CASH FLOWS FROM OPERATING ACTIVITIES

CASH PROVIDED BY OPERATING ACTIVITIES

(Dollars in millions)

	2016	2016 change	2015	2015 change	2014
Sempra Energy Consolidated	\$2,319	\$(586) (20)%	\$2,905	\$744 34%	\$2,161
SDG&E	1,327	(337) (20)	1,664	567 52	1,097
SoCalGas	671	(209) (24)	880	115 15	765

Sempra Energy Consolidated

Cash provided by operating activities at Sempra Energy decreased in 2016 primarily due to:

- \$451 million net decrease related to the natural gas leak at the Aliso Canyon storage facility, comprised of:
 - \$221 million net decrease in reserve for accrued expenditures in 2016 compared to a \$274 million increase in 2015. The \$221 million net decrease includes \$654 million of cash expenditures, offset by \$433 million of additional accruals, *offset by*
 - \$281 million net increase in receivable for expected insurance recovery in 2016 compared to a \$325 million increase in 2015. The \$281 million net increase includes \$450 million of additional accruals, offset by \$169 million in insurance proceeds. We discuss the Aliso Canyon leak further in Note 15 of the Notes to Consolidated Financial Statements and in “Risk Factors” in our 2016 Annual Report on Form 10-K;
- \$267 million lower net income, adjusted for noncash items included in earnings, in 2016 compared to 2015, including charges for income tax benefits previously generated from income tax repairs deductions that were reallocated to ratepayers pursuant to the 2016 GRC FD, as well as lower results at Sempra LNG & Midstream, as we discuss in “Results of Operations” above;
- \$348 million net decrease in undercollected regulatory balancing accounts (including long-term amounts included in regulatory assets) in 2016 at the California Utilities compared to a \$544 million net decrease in 2015. 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. See further discussion of changes in regulatory balances at both SDG&E and SoCalGas below;
- \$93 million higher income tax payments in 2016; and
- \$20 million increase in inventory in 2016 compared to a \$65 million decrease in 2015; **offset by**
- \$122 million increase in accounts payable in 2016 compared to a \$157 million decrease in 2015, primarily due to higher average cost of natural gas purchased at SoCalGas, as well as higher gas purchases as a result of the current moratorium on natural gas injections at the Aliso Canyon storage facility;
- \$145 million increase in permanent pipeline capacity release liability at Sempra LNG & Midstream. We discuss the permanent pipeline capacity releases in Note 15 of the Notes to Consolidated Financial Statements;
- \$42 million increase in accounts receivable in 2016 compared to a \$99 million increase in 2015. The 2015

increase was primarily due to an increase in physical gas sales at SoCalGas;

- \$36 million net decrease in greenhouse gas allowance purchases at the California Utilities; and
- \$23 million reduction to the SONGS regulatory asset due to cash received for SDG&E’s portion of the DOE settlement with Edison related to spent fuel storage, as we discuss in Note 15 of the Notes to Consolidated Financial Statements.

Cash provided by operating activities at Sempra Energy increased in 2015 compared to 2014 primarily due to:

- \$544 million net decrease in net undercollected regulatory balancing accounts in 2015 at the California Utilities (including long-term amounts included in regulatory assets) compared to a \$277 million net increase in 2014;
- \$245 million higher net income, adjusted for noncash items included in earnings, in 2015 compared to 2014, primarily due to improved operations at the California Utilities, as well as higher pipeline earnings at Sempra Mexico;
- \$65 million decrease in inventories in 2015 compared to a \$133 million increase in 2014, primarily due to mandated natural gas withdrawals, as well as lower volume added to storage at SoCalGas in 2015 as a result of the moratorium on natural gas injections at its Aliso Canyon natural gas storage facility; and
- \$126 million decrease in settlement payments and associated legal fees for wildfire claims at SDG&E in 2015 compared to 2014; **offset by**
- \$157 million decrease in accounts payable in 2015 compared to a \$109 million increase in 2014, primarily due to lower average cost of natural gas purchased at SoCalGas, as well as the moratorium on natural gas injections at its Aliso Canyon storage facility;
- \$179 million in purchases of greenhouse gas allowances (\$117 million at SDG&E and \$62 million at SoCalGas);
- \$99 million increase in accounts receivable in 2015 compared to a \$44 million decrease in 2014. The 2015 increase was primarily due to an increase in physical gas sales at SoCalGas; and
- \$325 million receivable for expected insurance recovery of certain expenditures related to the natural gas leak at the Aliso Canyon storage facility, and \$274 million reserve for accrued expenditures expected to be paid in 2016 related to the leak.

SDG&E

Cash provided by operating activities at SDG&E decreased in 2016 primarily due to:

- \$55 million decrease in net undercollected regulatory balancing accounts (including long-term amounts included

in regulatory assets) in 2016 compared to a \$474 million decrease in 2015, primarily due to changes in electric commodity accounts;

- \$49 million higher income tax payments in 2016; and
- \$19 million increase in receivables due from affiliates in 2016 compared to a \$21 million decrease in 2015; **offset by**
- \$72 million higher net income, adjusted for noncash items included in earnings, in 2016 compared to 2015;
- \$58 million in purchases of greenhouse gas allowances in 2016 compared to \$117 million in 2015; and
- \$23 million reduction to the SONGS regulatory asset due to cash received for SDG&E's portion of the DOE settlement with Edison related to spent fuel storage.

Cash provided by operating activities at SDG&E increased in 2015 compared to 2014 primarily due to:

- \$474 million decrease in net undercollected regulatory balancing accounts in 2015 compared to a \$47 million increase in 2014 (including long-term amounts included in regulatory assets in 2014). The 2015 decrease was primarily associated with the electric commodity accounts;
- \$126 million decrease in settlement payments and associated legal fees for wildfire claims in 2015 compared to 2014; and
- \$102 million higher net income, adjusted for noncash items included in earnings, in 2015 compared to 2014, primarily due to improved operations; **offset by**
- \$117 million in purchases of greenhouse gas allowances in 2015; and
- \$88 million income tax payments, net of income tax refunds, in 2015 due to utilization of net operating losses carried forward in 2015.

SoCalGas

Cash provided by operating activities at SoCalGas decreased in 2016 primarily due to:

- \$451 million net decrease related to the natural gas leak at the Aliso Canyon storage facility, comprised of:
 - \$221 million net decrease in reserve for accrued expenditures in 2016 compared to a \$274 million increase in 2015. The \$221 million net decrease includes \$654 million of cash expenditures, offset by \$433 million of additional accruals, *offset by*
 - \$281 million net increase in receivable for expected insurance recovery in 2016 compared to a \$325 million increase in 2015. The \$281 million net increase includes \$450 million of additional accruals, offset by \$169 million in insurance proceeds;
- \$4 million decrease in inventory in 2016 compared to a \$102 million decrease in 2015. The decrease in 2015 was

primarily due to the moratorium on natural gas injections at the Aliso Canyon storage facility;

- \$72 million lower net income, adjusted for noncash items included in earnings, in 2016 compared to 2015;
- \$40 million higher income tax payments in 2016;
- \$10 million decrease in accrued compensation in 2016 compared to a \$31 million increase in 2015; and
- \$85 million in purchases of greenhouse gas allowances in 2016 compared to \$62 million in 2015; **offset by**
- \$36 million increase in accounts payable in 2016 compared to a \$143 million decrease in 2015. The 2015 decrease was primarily due to the moratorium on natural gas injections at the Aliso Canyon storage facility, as well as lower average cost of natural gas purchased;
- \$293 million increase in net overcollected regulatory balancing accounts (including long-term amounts included in regulatory assets) in 2016 compared to a \$70 million decrease in net undercollected regulatory balancing accounts in 2015, primarily due to changes in fixed-cost balancing accounts; and
- \$37 million decrease in accounts receivable in 2016 compared to a \$90 million increase in 2015. The increase in 2015 was primarily due to an increase in physical gas sales.

Cash provided by operating activities at SoCalGas increased in 2015 compared to 2014 primarily due to:

- \$70 million decrease in net undercollected regulatory balancing accounts in 2015 (including long-term amounts included in regulatory assets) compared to a \$230 million decrease in net overcollected regulatory balancing accounts in 2014, primarily due to changes associated with the fixed cost balancing accounts;
- \$102 million decrease in inventories in 2015 compared to a \$113 million increase in 2014, primarily due to mandated natural gas withdrawals, as well as lower volume added to storage in 2015 as a result of the moratorium on natural gas injections at the Aliso Canyon natural gas storage facility; and
- \$110 million higher net income, adjusted for noncash items included in earnings, in 2015 compared to 2014, primarily due to improved operations; **offset by**
- \$143 million decrease in accounts payable in 2015 compared to a \$156 million increase in 2014, primarily due to lower average cost of natural gas purchased, as well as the moratorium on natural gas injections at its Aliso Canyon facility;
- \$90 million increase in accounts receivable in 2015 compared to a \$30 million decrease in 2014. The increase in 2015 was primarily due to an increase in physical gas sales in 2015;

- \$62 million in purchases of greenhouse gas allowances in 2015; and
- \$325 million receivable for expected insurance recovery of certain expenditures related to the natural gas leak at the

Aliso Canyon storage facility, and \$274 million reserve for accrued expenditures expected to be paid in 2016 related to the leak.

CASH FLOWS FROM INVESTING ACTIVITIES

CASH USED IN INVESTING ACTIVITIES

(Dollars in millions)

	2016	2016 change		2015	2015 change		2014
Sempra Energy Consolidated	\$(4,886)	\$2,001	69%	\$(2,885)	\$(457)	(14)%	\$(3,342)
SDG&E	(1,319)	233	21	(1,086)	(40)	(4)	(1,126)
SoCalGas	(1,269)	(133)	(9)	(1,402)	298	27	(1,104)

Sempra Energy Consolidated

Cash used in investing activities at Sempra Energy increased in 2016 primarily due to:

- \$1.4 billion increase in expenditures for investments and acquisition of businesses. See further detail of these expenditures below;
- \$1.1 billion increase in capital expenditures. See further detail of capital expenditures below;
- in 2015, \$347 million of net proceeds received from Sempra LNG & Midstream's sale of the remaining 625-MW block of its Mesquite Power plant and a related power sale contract; and
- \$63 million lower repayments of advances to unconsolidated affiliates; **offset by**
- \$443 million net proceeds received from Sempra LNG & Midstream's sale of its 25-percent interest in Rockies Express in May 2016;
- \$318 million net proceeds from Sempra LNG & Midstream's sale of EnergySouth in September 2016; and
- \$100 million decrease in Nuclear Decommissioning Trust assets in 2016 primarily as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in 2015 and 2016, compared to a \$60 million decrease in 2015.

Cash used in investing activities at Sempra Energy decreased in 2015 compared to 2014 primarily due to:

- \$347 million of net proceeds received from Sempra LNG & Midstream's sale of the remaining block of its Mesquite Power plant;
- \$43 million net decrease in advances to unconsolidated affiliates in 2015 compared to \$167 million net increase in advances in 2014;
- \$60 million decrease in Nuclear Decommissioning Trust assets at SDG&E in 2015 due to withdrawals for SONGS

decommissioning costs incurred in 2013 and 2014. We discuss the Nuclear Decommissioning Trusts further in Note 13 of the Notes to Consolidated Financial Statements; and

- \$26 million proceeds received from Sempra Renewables' sale of the Rosamond Solar development project; **offset by**
- in 2014, \$148 million cash proceeds, net of cash sold, from Sempra Renewables' sale of 50-percent equity interests in Copper Mountain Solar 3 (\$66 million) and Broken Bow 2 Wind (\$58 million), and Sempra Mexico's sale of a 50-percent equity interest in Energía Sierra Juárez (\$24 million); and
- \$33 million higher capital expenditures in 2015.

SDG&E

Cash used in investing activities at SDG&E increased in 2016 primarily due to:

- \$266 million increase in capital expenditures; and
- \$31 million net advances to Sempra Energy; **offset by**
- \$100 million decrease in Nuclear Decommissioning Trust assets in 2016 primarily as a result of CPUC authorization to withdraw trust funds for SONGS decommissioning costs incurred in 2015 and 2016, compared to a \$60 million decrease in 2015.

Cash used in investing activities at SDG&E decreased in 2015 compared to 2014 primarily due to:

- \$60 million decrease in Nuclear Decommissioning Trust assets in 2015 as a result of CPUC authorization to access trust funds for SONGS decommissioning costs incurred in 2013 and 2014; and
- \$30 million expenditures related to a long-term service agreement in 2014; **offset by**
- \$33 million increase in capital expenditures.

SoCalGas

Cash used in investing activities at SoCalGas decreased in 2016 due to:

- \$50 million net decrease in advances to Sempra Energy in 2016 compared to a \$50 million net increase in 2015; and
- \$33 million lower capital expenditures.

Cash used in investing activities at SoCalGas increased in 2015 compared to 2014 due to:

- \$248 million increase in capital expenditures; and
- \$50 million increase in net advances to Sempra Energy in 2015.

CAPITAL EXPENDITURES AND INVESTMENTS

Sempra Energy Consolidated Expenditures for PP&E

The following table summarizes capital expenditures for the years ended December 31, 2016, 2015 and 2014.

EXPENDITURES FOR PP&E (Dollars in millions)	Years ended December 31,		
	2016	2015	2014
SDG&E:			
Improvements to natural gas, including certain pipeline safety, and electric distribution systems	\$ 727	\$ 639	\$ 491
PSEP	121	98	63
Improvements to electric transmission systems	513	396	458
Electric generation plants and equipment	38	—	51
Substation expansions (transmission)	—	—	37
SoCalGas:			
Improvements to distribution, transmission and storage systems, and for certain pipeline safety	905	773	653
PSEP	292	361	206
Advanced metering infrastructure	95	206	230
Other natural gas projects	27	12	15
Sempra South American Utilities:			
Improvements to electric transmission and distribution systems and generation projects in Peru	134	98	122
Improvements to electric transmission and distribution infrastructure in Chile	60	56	52
Sempra Mexico:			
Construction of the Sonora, Ojinaga and San Isidro pipeline projects	302	278	244
Construction of other natural gas pipeline and wind projects, and capital expenditures at Ecogas	28	24	81
Sempra Renewables:			
Construction costs for wind projects	198	14	114
Construction costs for solar projects/facilities	637	62	74
Other	—	5	2
Sempra LNG & Midstream:			
Cameron Interstate Pipeline and other LNG liquefaction development costs	98	55	—
Development costs for Cameron LNG terminal and liquefaction project before formation of Cameron LNG JV	—	—	135
Development of natural gas storage capacity	1	7	58
Other	18	25	19
Parent and other	20	47	18
Total	\$4,214	\$3,156	\$3,123

Sempra Energy Consolidated Investments and Acquisitions

During the years ended December 31, 2016, 2015 and 2014, Sempra Energy made investments in various joint ventures and other businesses, summarized in the following table.

EXPENDITURES FOR INVESTMENTS AND ACQUISITION OF BUSINESSES⁽¹⁾				
<i>(Dollars in millions)</i>				
	Years ended December 31,			
	2016	2015	2014	
Sempra Mexico:				
Gasoductos de Chihuahua ⁽¹⁾	\$1,078	\$ —	\$ —	
Infraestructura Marina del Golfo	100	—	—	
Ventika	310	—	—	
Sempra Renewables:				
Expenditures for wind projects ⁽²⁾	29	19	4	
Expenditures for solar projects/facilities	—	5	210	
Other	15	—	—	
Sempra LNG & Midstream:				
Cameron LNG JV ⁽³⁾	47	59	18	
Mississippi Hub LLC ⁽⁴⁾	—	2	—	
Rockies Express Pipeline LLC ⁽⁵⁾	—	113	—	
Parent and other	3	2	8	
Total	\$1,582	\$200	\$240	

⁽¹⁾ Net of cash and cash equivalents acquired.

⁽²⁾ Excludes accrued purchase price of \$5 million in 2015.

⁽³⁾ Includes capitalized interest of \$47 million, \$49 million and \$12 million in 2016, 2015 and 2014, respectively, on Sempra LNG & Midstream's investment, as the joint venture has not commenced planned principal operations.

⁽⁴⁾ Investment in industrial development bonds.

⁽⁵⁾ Repayment of project debt that matured in early 2015.

Sempra Energy Consolidated Distributions from Investments

Sempra Energy's distributions from investments are primarily the return of investment from equity method and other investments at Sempra Renewables. Distributions of earnings from equity method investments, which are not included in the table below, represent return on the investments and are included in cash flows from operations.

During the years ended December 31, 2016, 2015 and 2014, Sempra Energy received distributions from investments in various joint ventures and other investments as summarized in the following table.

DISTRIBUTIONS FROM INVESTMENTS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Sempra Renewables	\$25	\$15	\$11
Parent and other	—	—	2
Total	\$25	\$15	\$13

FUTURE CONSTRUCTION EXPENDITURES AND INVESTMENTS

The amounts and timing of capital expenditures are generally subject to approvals by various regulatory and other governmental and environmental bodies, including the CPUC and the FERC. In 2017, we expect to make capital expenditures and investments of approximately \$3.4 billion, as summarized in the following table.

FUTURE CONSTRUCTION EXPENDITURES AND INVESTMENTS

(Dollars in millions)

	Year ended December 31, 2017
SDG&E:	
Improvements to natural gas, including certain pipeline safety, and electric and generation distribution systems	\$ 840
PSEP	60
Improvements to electric transmission systems	400
SoCalGas:	
Improvements to distribution, transmission and storage systems, and for certain pipeline safety	900
PSEP	200
Other natural gas projects	100
Sempra South American Utilities:	
Improvements to electric transmission and distribution systems and generation projects in Peru	160
Improvements to electric transmission and distribution infrastructure in Chile	110
Sempra Mexico:	
Construction of the Sonora, Ojinaga and San Isidro pipeline projects	190
Construction of other natural gas pipeline and solar projects	170
Sempra Renewables:	
Construction costs for wind and solar projects/facilities	180
Sempra LNG & Midstream:	
Development of LNG and natural gas transportation projects	110
Total	\$3,420

We discuss significant capital projects, planned and in progress, at each of our segments above in “Our Business.”

Over the next five years, 2017 through 2021, and subject to the factors described below which could cause these estimates to vary substantially, Sempra Energy expects to make aggregate capital expenditures of approximately \$12.3 billion at the California Utilities and \$1.9 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 and Sempra LNG & Midstream, 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 13, 14 and 15 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					
<i>(Dollars in millions)</i>					
	2016	2016 change	2015	2015 change	2014
Sempra Energy Consolidated	\$2,513	\$2,686	\$(173)	\$(1,027)	\$854
SDG&E	(20)	546	(566)	(576)	10
SoCalGas	552	57	495	98	397

Sempra Energy Consolidated

Financing activities at Sempra Energy were a net source of cash in 2016 compared to a net use of cash in 2015, primarily due to:

- \$692 million net increase in short-term debt in 2016 compared to a \$622 million net decrease in 2015;
- \$1.2 billion proceeds received from the IEnova follow-on common stock offerings, net of offering costs and Sempra Energy’s participation, as we discuss in Note 1 of the Notes to Consolidated Financial Statements; and
- \$474 million net proceeds from tax equity funding from certain wind and solar power generation projects at Sempra Renewables; **offset by**
- \$203 million higher payments on debt, including higher payments of long-term debt of \$255 million (payments of \$991 million in 2016 compared to \$736 million in 2015), offset by lower payments of commercial paper and other short-term debt with maturities greater than 90 days of \$52 million (payments of \$1.07 billion in 2016 compared to \$1.12 billion in 2015);
- \$58 million increase in common stock dividends paid in 2016;
- \$52 million from excess tax benefits related to share-based compensation in 2015. In connection with the adoption of a new accounting standard related to share-based

compensation, discussed in Note 2 of the Notes to Consolidated Financial Statements, \$34 million of similar excess tax benefits are now recorded to earnings and included as an operating activity beginning in 2016; and

- \$41 million lower issuances of debt, including a decrease in issuances of long-term debt of \$812 million (\$1.6 billion in 2016 compared to \$2.4 billion in 2015), offset by an increase in commercial paper and other short-term debt borrowings with maturities greater than 90 days of \$771 million (\$1.4 billion in 2016 compared to \$633 million in 2015).

Financing activities at Sempra Energy were a net use of cash in 2015 compared to a net source of cash in 2014, primarily due to:

- \$622 million net decrease in short-term debt in 2015 compared to a \$412 million net increase in 2014; and
- \$280 million lower issuances of debt, including a decrease in commercial paper and other short-term debt borrowings with maturities greater than 90 days of \$630 million (\$633 million in 2015 compared to \$1.3 billion in 2014), offset by higher issuances of long-term debt of \$350 million (\$2.4 billion in 2015 compared to \$2 billion in 2014); **offset by**
- \$180 million lower payments on debt, including lower payments of long-term debt of \$467 million (\$736 million

- in 2015 compared to \$1.2 billion in 2014), offset by higher payments of commercial paper and other short-term debt with maturities greater than 90 days of \$287 million (\$1.1 billion in 2015 compared to \$831 million in 2014);
- \$74 million purchase of noncontrolling interests in 2014; and
 - \$52 million tax benefit related to share-based compensation in 2015 (see additional discussion in Notes 2 and 6 of the Notes to Consolidated Financial Statements).

SDG&E

Cash used in financing activities at SDG&E decreased in 2016 primarily due to:

- \$343 million lower payments on long-term debt in 2016;
- \$125 million decrease in common stock dividends paid in 2016; and
- \$54 million higher issuances of long-term debt in 2016.

At SDG&E, financing activities were a net use of cash in 2015 compared to a net source of cash in 2014, primarily due to:

- \$523 million higher payments on long-term debt in 2015;
- \$131 million net decrease in short-term debt in 2015 compared to a \$187 million net increase in 2014; and

- \$100 million increase in common stock dividends paid (\$300 million in 2015 compared to \$200 million in 2014); **offset by**
- \$344 million higher issuances of debt with maturities greater than 90 days in 2015.

SoCalGas

Cash provided by financing activities at SoCalGas increased in 2016 primarily due to:

- \$62 million increase in short-term debt in 2016 compared to a \$50 million decrease in 2015; and
- \$50 million common stock dividends paid in 2015; **offset by**
- \$100 million lower issuances of long-term debt in 2016.

Cash provided by financing activities at SoCalGas increased in 2015 compared to 2014 primarily due to:

- \$250 million payments of long-term debt in 2014; and
- \$50 million lower common stock dividends paid in 2015; **offset by**
- \$148 million lower issuances of long-term debt in 2015; and
- \$50 million net decrease in short-term debt in 2015 compared to an \$8 million net increase in 2014.

LONG-TERM DEBT

LONG-TERM DEBT⁽¹⁾

(Dollars in millions)

	At December 31,			Weighted average at December 31, 2016	
	2016	2015	2014	Maturity (in years)	Interest rate
Sempra Energy Consolidated	\$15,342	\$14,041	\$12,555	10.5	4.23%
SDG&E	4,849	4,505	4,648	14.0	4.19
SoCalGas	2,982	2,490	1,891	13.3	3.72

⁽¹⁾ Includes current portion of long-term debt.

Issuances of Long-Term Debt

Major issuances of long-term debt over the last three years include the following:

ISSUANCES OF LONG-TERM DEBT		
<i>(Dollars in millions)</i>		
	Amount at issuance	Maturity
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
2015:		
Sempra Energy 2.40% notes	500	2020
Sempra Energy 2.85% notes	400	2020
Sempra Energy 3.75% notes	350	2025
SDG&E 1.914% first mortgage bonds	250	2022
SDG&E variable-rate first mortgage bonds (1.151% at December 31, 2016)	140	2017
SoCalGas 3.20% first mortgage bonds	350	2025
SoCalGas 1.55% first mortgage bonds	250	2018
2014:		
Sempra Energy 3.55% notes	500	2024
SDG&E 366-day 0.40% commercial paper	100	2015
SoCalGas 3.15% first mortgage bonds	500	2024
SoCalGas 4.45% first mortgage bonds	250	2044

Sempra Energy used the proceeds from its issuances of long-term debt primarily to repay outstanding commercial paper and for general corporate purposes. We discuss issuances of long-term debt further in Note 5 of the Notes to Consolidated Financial Statements.

The California Utilities used the proceeds from their issuances of long-term debt:

- for general working capital purposes;
- to support their electric (at SDG&E) and natural gas (at SDG&E and SoCalGas) procurement programs;

- to repay commercial paper, maturing long-term debt and certain long-term debt prior to maturity; and
- to replenish amounts expended and fund future expenditures for the expansion and improvement of their utility plants.

Payments on Long-Term Debt

Major payments on long-term debt over the last three years include the following:

PAYMENTS ON LONG-TERM DEBT		
<i>(Dollars in millions)</i>		
	Payments	Maturity
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
2015:		
SDG&E 5.3% first mortgage bonds	250	2015
SDG&E 4.9%-5.5% notes and industrial development revenue bonds	169	2021-2027
SDG&E 366-day commercial paper	100	2015
SDG&E 1.914% amortizing first mortgage bonds	18	2022
Sempra Mexico variable-rate notes	51	2017
Sempra LNG & Midstream variable-rate industrial development bonds	55	2037
2014:		
Sempra Energy 2% notes	500	2014
Sempra Energy variable-rate notes	300	2014
SoCalGas 5.5% notes	250	2014
Luz del Sur 5.1%-6.75% bank loans	62	2015-2016
Luz del Sur 5.72%-6.47% notes	54	2014

In Note 5 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 employee stock option exercises and newly issued shares under our dividend reinvestment and direct stock purchase plans and our 401(k) saving plan was

- \$51 million in 2016
- \$52 million in 2015
- \$56 million in 2014

DIVIDENDS

Sempra Energy

Sempra Energy paid cash dividends on common stock of:

- \$686 million in 2016
- \$628 million in 2015
- \$598 million in 2014

On December 16, 2016, Sempra Energy declared a quarterly dividend of \$0.755 per share of common stock that was paid on January 15, 2017.

Dividends declared have increased in each of the last three years due to an increase in the per-share quarterly dividends from \$0.66 in 2014 (\$2.64 annually) to \$0.70 in 2015 (\$2.80 annually) to \$0.755 in 2016 (\$3.02 annually).

On February 23, 2017, our board of directors approved an increase to Sempra Energy's quarterly common stock dividend to \$0.8225 per share (\$3.29 annually). Declarations of dividends on our common stock are made at the discretion of the board. 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.

SDG&E

In 2016, 2015 and 2014, SDG&E paid dividends to Enova Corporation (Enova) and Enova paid corresponding dividends to Sempra Energy of \$175 million, \$300 million and \$200 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 large capital program (over \$1 billion per year).

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 Pacific Enterprises (PE) and PE paid corresponding dividends to Sempra Energy of \$50 million and \$100 million in 2015 and 2014, respectively. No dividends were declared in 2016. SoCalGas' dividends on common stock declared on an annual historical basis may not be indicative of future declarations, and could be impacted or suspended over the next few years in order for SoCalGas to maintain its authorized capital structure while managing its large capital program (over \$1 billion per year).

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, 2016, based on these regulations, Sempra Energy could have received loans and dividends of approximately \$579 million from SDG&E and \$340 million from SoCalGas.

We provide additional information about dividend restrictions in "Restricted Net Assets" in Note 1 of the Notes to Consolidated Financial Statements.

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			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated ⁽¹⁾	SDG&E ⁽¹⁾	SoCalGas
	December 31, 2016		
Total capitalization	\$32,362	\$10,527	\$6,554
Debt-to-capitalization ratio	53%	46%	46%
	December 31, 2015		
Total capitalization	\$27,242	\$ 9,949	\$5,639
Debt-to-capitalization ratio	54%	47%	44%

⁽¹⁾ Includes noncontrolling interest and debt of Otay Mesa VIE with no significant impact.

Significant changes during 2016 that affected capitalization include the following:

- Sempra Energy Consolidated: comprehensive income exceeding dividends plus the sale of noncontrolling interests, partially offset by an increase in both long-term and short-term debt
- SDG&E: comprehensive income exceeding dividends, partially offset by a net increase in debt

- SoCalGas: primarily an increase in both long-term and short-term debt, partially offset by comprehensive income

We provide additional information about these significant changes in Notes 1 and 5 of the Notes to Consolidated Financial Statements.

COMMITMENTS

The following tables summarize principal contractual commitments, primarily long-term, at December 31, 2016 for Sempra Energy Consolidated, SDG&E and SoCalGas. We provide additional information about commitments above and in Notes 5, 7, 13 and 15 of the Notes to Consolidated Financial Statements.

PRINCIPAL CONTRACTUAL COMMITMENTS – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	2017	2018 and 2019	2020 and 2021	Thereafter	Total
Long-term debt	\$ 905	\$2,831	\$1,530	\$ 9,805	\$15,071
Interest on long-term debt ⁽¹⁾	626	1,092	937	4,735	7,390
Operating leases	78	130	103	306	617
Capital leases ⁽²⁾	11	24	29	682	746
Purchased-power contracts	666	1,336	1,214	6,205	9,421
Natural gas contracts	388	436	84	144	1,052
LNG contract ⁽³⁾	446	875	857	4,004	6,182
Construction commitments	398	117	67	245	827
Build-to-suit lease	10	20	22	245	297
SONGS decommissioning	74	124	144	295	637
Sunrise Powerlink wildfire mitigation fund	3	7	6	102	118
Other asset retirement obligations	48	98	86	1,684	1,916
Pension and other postretirement benefit obligations ⁽⁴⁾	188	428	480	1,195	2,291
Environmental commitments ⁽⁵⁾	8	18	4	44	74
Other	18	15	15	18	66
Total	\$3,867	\$7,551	\$5,578	\$29,709	\$46,705

⁽¹⁾ We calculate expected interest payments using the stated interest rate for fixed-rate obligations. We calculate expected interest payments for variable-rate obligations, including fixed-to-floating interest rate swaps, based on forward rates in effect at December 31, 2016.

⁽²⁾ Of the present value of the net minimum lease payments, \$500 million will be recorded as a capital lease obligation when construction of the peaker plant facility is completed and delivery of contracted power commences, which is scheduled to occur in June 2017.

⁽³⁾ Sempra LNG & Midstream has a purchase agreement with a major international company for the supply of LNG to the Energía Costa Azul terminal. The agreement is priced using a predetermined formula based on forward prices of the index applicable from 2017 to 2028 and an estimated one percent escalation in 2029. We provide more information about this contract in Note 15 of the Notes to Consolidated Financial Statements.

⁽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)

	2017	2018 and 2019	2020 and 2021	Thereafter	Total
Long-term debt	\$ 186	\$ 528	\$ 421	\$ 3,519	\$ 4,654
Interest on long-term debt ⁽¹⁾	194	370	345	2,137	3,046
Operating leases	27	45	39	71	182
Capital leases ⁽²⁾	9	23	29	679	740
Purchased-power contracts	563	1,102	974	5,865	8,504
Construction commitments	59	61	15	8	143
SONGS decommissioning	74	124	144	295	637
Sunrise Powerlink wildfire mitigation fund	3	7	6	102	118
Other asset retirement obligations	5	10	9	169	193
Pension and other postretirement benefit obligations ⁽³⁾	43	100	104	247	494
Environmental commitments	2	2	2	42	48
Total	\$1,165	\$2,372	\$2,088	\$13,134	\$18,759

⁽¹⁾ SDG&E calculates expected interest payments using the stated interest rate for fixed-rate obligations, including floating-to-fixed interest rate swaps. SDG&E calculates expected interest payments for variable-rate obligations based on forward rates in effect at December 31, 2016.

⁽²⁾ Of the present value of the net minimum lease payments, \$500 million will be recorded as a capital lease obligation when construction of the peaker plant facility is completed and delivery of contracted power commences, which is scheduled to occur in June 2017.

⁽³⁾ Amounts represent expected SDG&E contributions to the plans for the next 10 years.

PRINCIPAL CONTRACTUAL COMMITMENTS – SOCALGAS

(Dollars in millions)

	2017	2018 and 2019	2020 and 2021	Thereafter	Total
Long-term debt	\$ —	\$ 500	\$ —	\$2,509	\$3,009
Interest on long-term debt ⁽¹⁾	112	194	189	1,150	1,645
Natural gas contracts	139	158	46	82	425
Operating leases	42	70	52	134	298
Construction commitments	3	6	4	—	13
Environmental commitments ⁽²⁾	6	16	1	2	25
Pension and other postretirement benefit obligations ⁽³⁾	91	251	293	838	1,473
Asset retirement obligations	43	88	77	1,451	1,659
Total	\$436	\$1,283	\$662	\$6,166	\$8,547

⁽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, 2016 of

- \$58 million for Sempra Energy Consolidated
- \$22 million for SDG&E
- \$29 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 tax benefits in Note 6 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, 2016 is \$4.4 billion. We discuss these guarantees in Note 4 of the Notes to Consolidated Financial Statements.

SDG&E has entered into power purchase arrangements which are variable interests. We discuss variable interests in Note 1 of the Notes to Consolidated Financial Statements.

FACTORS INFLUENCING FUTURE PERFORMANCE

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.

Electric Rate Reform – California Assembly Bill 327

Assembly Bill (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, as well as 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 establishes comprehensive reform and a framework for rates that are more transparent, fair and sustainable. The decision directs changes beginning in summer 2015 and provides a path for continued reforms through 2020. The changes also include 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. For SDG&E, the number of tiers was reduced from four to three in 2015 and was reduced to two on July 1, 2016. The rate differential between the highest and lowest tiers was reduced from approximately 2.4 times to 2.1 times in 2016, with further reductions intended to reach a differential of 1.25 times as early as 2019. The timing of this reduction in rate differential between the highest and lowest tiers may be impacted by a limitation the CPUC has placed on the rate of increase of the lower tier when it is adjusted annually. SDG&E is seeking a change to this limitation, given the priorities established by AB 327. The decision also directs the utilities to pursue expanded time of use rates and implements a high usage surcharge in 2017 for usage that exceeds average customer usage by approximately 400 percent. 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. In January 2017, the CPUC also approved a Time-of-Use (TOU) rulemaking that provides a framework and guiding principles for designing, implementing, and modifying the time periods in TOU rates for residential customers. These changes, when fully implemented, should result in significant rate relief for higher-use SDG&E customers who do not exceed the high usage surcharge threshold and will 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 net energy metering (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 their own energy usage. In addition, if a NEM customer generates any electricity over the annual measurement period that exceeds their annual consumption, they receive compensation at a rate equal to a wholesale energy price.

In January 2016, the CPUC adopted modest changes to the NEM program to require NEM customers to pay some costs that would otherwise be borne by non-NEM customers and moves new NEM customers to time-of-use rates. Together with a reduction in tiered rate differentials and the potential implementation of a fixed charge discussed above, the NEM successor tariff begins a process of reducing the cost burden on non-NEM customers. In March 2016, SDG&E, Edison, PG&E, TURN and the California Coalition of Utility Employees filed applications with the CPUC requesting rehearing of its January 2016 decision. In September 2016, the CPUC issued an order denying the rehearing requests in all respects. SDG&E implemented the adopted successor NEM tariff in July 2016, after reaching the 617-MW cap established for the prior NEM program.

Appropriate NEM reform is necessary to 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 design would be preferable to recovering these costs from customers not participating in NEM. If NEM self-generating installations were to increase substantially through 2019 when more significant reforms are to take effect, 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 "Risk Factors" in our 2016 Annual Report on Form 10-K.

Distributed Energy Storage – California Assembly Bill 2868

AB 2868, signed into law in September 2016, requires the CPUC to direct electrical corporations, including SDG&E, to file applications for programs and investments to accelerate the widespread deployment of distributed energy storage systems. AB 2868 sets a cap of 500 MW statewide, divided equally among the state's three largest electrical corporations (SDG&E's share being 166 MW); requires that no more than

25 percent of the capacity of distributed energy storage systems be on the customer side of the utility meter; and requires the CPUC to prioritize these programs and investments for the public sector and low-income customers.

Community Choice Aggregation (CCA)

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 the majority of its customer load, customers have the ability to receive, through CCA, procurement service from a load serving entity other than SDG&E if the customer's local jurisdiction (city) offers such a program. A number of cities in our service territory have expressed interest in CCA, which, if widely adopted, could result in substantial reductions in the load we are required to serve. 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 are otherwise borne by its remaining bundled procurement customers. This issue is addressed by existing rate mechanisms that attempt to ensure bundled ratepayer indifference in the event of departing load, but these existing mechanisms may not be sufficient to ensure that remaining bundled customers do not experience any cost increase as a result of departing load, and the utility bears some risk that its procured resources may become stranded and associated costs not recoverable.

Renewable Energy Procurement

SDG&E is subject to the Renewables Portfolio Standard (RPS) Program administered by both the CPUC and the California Energy Commission, which requires each California utility to procure 50 percent of its annual electric energy requirements from renewable energy sources by 2030.

The RPS Program currently contains flexible compliance mechanisms that can be used to comply with or meet the RPS Program mandates. The mechanisms provide for a CPUC waiver under certain conditions, including: 1) a finding of inadequate transmission; 2) delays in the start-up of commercial operations of renewable energy projects due to permitting or interconnection; or 3) unexpected curtailment by an electric system balancing authority, such as the California ISO.

SDG&E has procured renewable energy supplies from certain suppliers whose assets are not yet online. Some of these assets remain contingent on electric transmission infrastructure, regulatory approval, project permitting and financing, and the implementation of new technologies.

SDG&E believes it will continue to comply with the RPS Program requirements 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 affect its business, cash flows, financial condition, results of operations and/or prospects. The CPUC has neither audited our RPS Program compliance nor provided us with clearance for any compliance periods.

Clean Energy and Pollution Reduction Act – California SB 350

SB 350 creates new requirements in the areas of renewable energy procurement, energy efficiency, resource planning, and electric vehicle (EV) infrastructure. The measure requires all load serving entities, including SDG&E, to file integrated resource plans that will ultimately enable the electric sector to achieve reductions in greenhouse gas (GHG) emissions of 40 percent compared to 1990 levels by 2030. SB 350 also clearly specifies that the utilities will file applications with the CPUC that highlight how they can help with the development and expansion of the electric charging infrastructure necessary to support the growth of the EV market expected due to the state's alternative fuel vehicle policy initiative. We expect to meet the higher RPS and GHG emissions reductions requirements and are supportive of greater infrastructure development to promote electric vehicle charging.

SONGS

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. We discuss regulatory and other matters related to SONGS, including a reopened CPUC proceeding that is considering whether a SONGS-related amended settlement agreement approved in 2014 is reasonable and in the public interest, and the ability to timely withdraw funds from trust accounts for the payment of decommissioning costs, in Notes 13 and 15 of the Notes to Consolidated Financial Statements and in "Risk Factors" in our 2016 Annual Report on Form 10-K.

Wildfire Claims Cost Recovery

In September 2015, SDG&E filed an application with the CPUC requesting rate recovery of an estimated \$379 million in costs related to the October 2007 wildfires that have been recorded to the Wildfire Expense Memorandum Account (WEMA), as we discuss in Note 15 of the Notes to Consolidated Financial Statements.

In April 2016, the CPUC issued a ruling establishing the scope and schedule for the proceeding, which will be managed in two phases. Phase 1 will address SDG&E's operational and management prudence surrounding the 2007 wildfires. Phase 2 will address whether SDG&E's actions and decision-making in connection with settling legal claims in relation to the wildfires were reasonable. In October 2016, intervening parties submitted Phase 1 testimony raising various concerns with SDG&E's operations and management prior to and during the 2007 wildfires, and SDG&E responded to that testimony in December 2016. Participating parties asked that the CPUC reject SDG&E's request for cost recovery. A Phase 1 final decision is scheduled to be issued in the second half of 2017. The Phase 2 procedural schedule will be determined after Phase 1 is concluded.

Recovery of these costs in rates will require future regulatory approval. SDG&E will continue to assess the likelihood, amount and timing of such recoveries in rates. Should SDG&E conclude that recovery of excess wildfire costs in rates is no longer probable, at that time SDG&E would record a charge against earnings. If SDG&E had concluded that the recovery of regulatory assets related to CPUC-regulated operations was no longer probable or was less than currently estimated, at December 31, 2016, the resulting after-tax charge against earnings would have been up to approximately \$208 million. A failure to obtain substantial or full recovery of the requested amount of these costs from customers, or any negative assessment of the likelihood of recovery, would likely have a material adverse effect on Sempra Energy's and SDG&E's financial condition, cash flows and results of operations. We discuss the October 2007 wildfires and how we assess the probability of recovery of our regulatory assets in Notes 15 and 1, respectively, of the Notes to Consolidated Financial Statements.

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 natural gas leak at Aliso Canyon, which we discuss below and in Note 15 of the Notes to Consolidated Financial Statements and in "Risk Factors" in our 2016 Annual Report on Form 10-K.

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, which SoCalGas has operated as a gas storage facility since 1972. SoCalGas worked closely with several of the world's leading experts to stop the leak. On February 18, 2016, DOGGR confirmed that the well was permanently sealed.

Local Community Mitigation Efforts

Pursuant to a stipulation and order by the Los Angeles County Superior Court (Superior Court), SoCalGas provided temporary relocation support to residents in the nearby community who requested it before the well was permanently sealed. Following the permanent sealing of the well and the completion of the Los Angeles County Department of Public Health's (DPH) indoor testing of certain homes in the Porter Ranch community, which concluded that indoor conditions did not present a long-term health risk and that it was safe for residents to return home, the Superior Court issued an order in May 2016. The order ruled that: (1) currently relocated residents be given the choice to request residence cleaning prior to returning home, with such cleaning to be performed according to the DPH's proposed protocol and at SoCalGas' expense, and (2) the relocation program for currently relocated residents would then terminate. SoCalGas completed the cleaning program, and the relocation program ended in July 2016.

Apart from the Superior Court order, in May 2016, the DPH also issued a directive that SoCalGas 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 have experienced symptoms from the natural gas 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 total 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), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Litigation

In connection with the natural gas leak at the Aliso Canyon storage facility, as of February 27, 2017, 250 lawsuits, including over 14,000 plaintiffs, have been filed against SoCalGas, some of which have also named Sempra Energy. Derivative and securities claims have also been filed on behalf of Sempra Energy and/or SoCalGas shareholders

against certain officers and directors of Sempra Energy and/or SoCalGas. We provide further detail on these cases, as well as complaints filed by the California Attorney General, acting in an independent capacity and on behalf of the people of the State of California and the California Air Resources Board (CARB), together with the Los Angeles City Attorney; the South Coast Air Quality Management District (SCAQMD); the County of Los Angeles, on behalf of itself and the people of the State of California; and a misdemeanor criminal complaint filed by the Los Angeles County District Attorney's Office; in Note 15 of the Notes to Consolidated Financial Statements. Additional litigation may be filed against us in the future related to the Aliso Canyon incident or our responses thereto.

The costs of defending against these civil and criminal lawsuits, cooperating with these 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), or if there were to be significant delays in receiving insurance recoveries, could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Governmental Investigations

Various governmental agencies have investigated or are investigating this incident.

- In January 2016, the Governor of the State of California issued the Governor's Order proclaiming a state of emergency to exist in Los Angeles County due to the natural gas leak at the Aliso Canyon facility. The Governor's Order imposes various orders with respect to: stopping the leak; protecting public health and safety; ensuring accountability; and strengthening oversight. We provide further detail regarding the Governor's Order and CARB's *Aliso Canyon Methane Leak Climate Impacts Mitigation Program*, issued pursuant to the Governor's Order, in Note 15 of the Notes to Consolidated Financial Statements.
- In January 2016, SoCalGas entered into a Stipulated Order for Abatement with the SCAQMD and agreed to take various actions in connection with injecting and withdrawing natural gas at Aliso Canyon, sealing the well, monitoring, reporting, safety and funding a health impact study, among other things. In February 2017, SoCalGas entered into a settlement agreement with the SCAQMD that calls for the SCAQMD to petition its Hearing Board for dismissal of the order. We provide further detail regarding the SCAQMD stipulated abatement order in Note 15 of the Notes to Consolidated Financial Statements.

- In January 2016, the DOGGR and CPUC selected Blade Energy Partners (Blade) to conduct an independent analysis under the direction and supervision of the DOGGR and CPUC to be funded by SoCalGas to investigate the technical root cause of the Aliso Canyon natural gas leak. The timing of the root cause analysis is under the control of Blade, the DOGGR and the CPUC.
- In June 2016, the California Division of Occupational Safety and Health issued four citations to SoCalGas alleging violations of various regulations, including that SoCalGas failed to ensure that testing and inspection of well casing and tubing at the Aliso Canyon storage facility complied with testing and inspection requirements, with total penalties of \$60,800. SoCalGas has filed an appeal of all four citations on the grounds that no violations of the cited regulations occurred, the citations are all preempted by federal law, the citations were not issued in a timely manner, and two of the citations are duplicative.
- In February 2017, the CPUC opened a proceeding to determine the feasibility of minimizing or eliminating use of the Aliso Canyon natural gas storage facility, while still maintaining energy and electric reliability for the region, as we discuss below in "SB 380."

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. Aliso Canyon, 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 has not injected natural gas into Aliso Canyon since October 25, 2015, pursuant to orders by DOGGR and the Governor, and SB 380. Limited withdrawals of natural gas from Aliso Canyon have been made in 2017 to augment natural gas supplies during critical demand periods.

If the Aliso Canyon facility were to be taken out of service for any meaningful period of time, it could result in an impairment of the facility, significantly higher than expected operating costs and/or additional capital expenditures, and natural gas reliability and electric generation could be jeopardized. At December 31, 2016, the Aliso Canyon facility has a net book value of \$531 million, including \$217 million of construction work in progress for the project to construct a new compression station. 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.

Section 455.5 of the California Public Utilities Code, among other things, directs regulated utilities to notify the CPUC if any facility or any portion of a major facility has been out of service for nine consecutive months. Although SoCalGas does not believe the Aliso Canyon facility or any portion of that facility has been out of service for nine consecutive months, SoCalGas provided notification for transparency, and because the process for obtaining authorization to resume injection operations at the facility is taking longer to complete than initially contemplated. In response, and as required by Section 455.5, the CPUC issued a draft Order Instituting Investigation to address whether the Aliso Canyon facility or any portion of that facility has been out of service for nine consecutive months pursuant to Section 455.5, and if it is determined to have been out of service, whether the CPUC should adjust SoCalGas' rates to reflect the period the facility is deemed to have been out of service. If the CPUC adopts the order as drafted and as required under Section 455.5, hearings on the investigation will be consolidated with SoCalGas' next GRC proceeding.

In March 2016, the CPUC issued a decision directing SoCalGas to establish a memorandum account to prospectively track its authorized revenue requirement and all revenues that it receives for its normal, business-as-usual costs to own and operate the Aliso Canyon natural gas storage field. The CPUC will determine at a later time whether, and to what extent, the authorized revenues tracked in the memorandum account may be refunded to ratepayers. Pursuant to the CPUC's decision, SoCalGas filed an advice letter requesting to establish a memorandum account to track all normal, business-as-usual costs to own and operate the Aliso Canyon storage field. In September 2016, the advice letter was approved and made effective as of March 17, 2016, the date of the decision directing the company to establish the account.

Insurance

Excluding directors and officers liability insurance, we have four kinds of insurance policies that together provide between \$1.2 billion to \$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 have been communicating with our insurance carriers and intend to pursue the full extent of our insurance coverage. Through December 31, 2016, we have received \$169 million of insurance proceeds related to control of well expenses and temporary relocation costs. There can be no assurance that we will be successful in obtaining insurance coverage for costs related to the leak under the applicable policies, and to the extent we are not successful in obtaining

coverage, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Our recorded estimate as of December 31, 2016 of \$780 million of certain costs in connection with the Aliso Canyon storage facility leak may rise significantly as more information becomes available, and any costs not included in the \$780 million estimate could be material. To the extent not covered by insurance (including any costs in excess of applicable policy limits), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on Sempra Energy's and SoCalGas' cash flows, financial condition and results of operations.

New Regulation

The Pipeline and Hazardous Materials Safety Administration (PHMSA), DOGGR, SCAQMD, Environmental Protection Agency and CARB have each commenced separate rulemaking proceedings to adopt further regulations covering natural gas storage facilities and injection wells. DOGGR issued new draft regulations for all storage fields in California, and in 2016, the California Legislature enacted four separate bills, discussed below, 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, have been or may be scheduled, additional legislation has been proposed in the California Legislature, and additional laws, orders, rules and regulations may be adopted. The Los Angeles County Board of Supervisors formed a task force to review and potentially implement new, more stringent land use (zoning) requirements and associated regulations and enforcement protocols for oil and gas activities, including natural gas storage field operations, which could materially affect new or modified uses of the Aliso Canyon and other natural gas storage fields located in the County.

We discuss these matters further in Note 15 of the Notes to Consolidated Financial Statements and in "Risk Factors" in our 2016 Annual Report on Form 10-K.

PIPES Act of 2016

In June 2016, the "Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016" or the "PIPES Act of 2016" was enacted. Among other things, the PIPES Act:

- requires PHMSA to issue, within two years of passage, "minimum safety standards for underground natural gas storage facilities;"
- imposes a "user fee" on underground storage facilities as needed to implement the safety standards;

- grants PHMSA authority to issue emergency orders and impose emergency restrictions, prohibitions and safety measures on owners and operators of gas or hazardous liquid pipeline facilities without prior notice or an opportunity for hearing, if the Secretary of Energy determines that an unsafe condition or practice, or a combination of unsafe conditions and practices, constitutes or is causing an imminent hazard; and
- directs the Secretary of Energy to establish an Interagency Task Force comprised of representatives from various federal agencies and representatives of state and local governments.

In October 2016, the Interagency Task Force formed by the DOE and PHMSA under the PIPES Act issued its final report on natural gas storage safety. Among other things, the report further provides 44 specific recommendations to industry and to federal, state, and local regulators and governments intended to reduce the likelihood of future leaks and minimize the impacts of any that occur. The report and its 44 recommendations may result in additional regulations.

In December 2016, PHMSA published an interim final rule pursuant to the PIPES Act of 2016 that revises the federal pipeline safety regulations relating to underground natural gas storage facilities. The interim final rule incorporates by reference American Petroleum Institute (API) Recommended Practices 1170, *Design and Operation of Solution-Mined Salt Caverns Used for Natural Gas Storage* (July 2015); and API Recommended Practice 1171, *Functional Integrity of Natural Gas Storage in Depleted Hydrocarbon Reservoirs and Aquifer Reservoirs* (September 2015). The two Recommended Practices are comprised of consensus safety measures for the construction, maintenance, risk-management, and integrity-management procedures for natural gas storage. SoCalGas began the process of implementing the recommendations of API 1171 prior to formal adoption by PHMSA and is developing the associated documents and procedures required to demonstrate compliance with the standards.

SB 380

In May 2016, SB 380 became law and requires, among other things:

- the continued prohibition against SoCalGas injecting any natural gas into the Aliso Canyon facility until a comprehensive review of the safety of the gas storage wells at the facility is completed in accordance with regulations adopted by DOGGR, the State Oil and Gas Supervisor has made a safety determination and other required findings, at least one public hearing has been held in the affected community, and the Executive Director of the CPUC has issued a concurring letter regarding the Supervisor's determination of safety;

- that all gas storage wells returning to service at the Aliso Canyon storage field inject or produce gas only through the interior metal tubing and not through the annulus between the tubing and the well casing, which allows SoCalGas wells to operate with two complete barriers to mitigate the potential for an uncontrolled release of natural gas; and
- a CPUC proceeding (which was opened in February 2017) to determine the feasibility of minimizing or eliminating use of the Aliso Canyon natural gas storage facility, while still maintaining energy and electric reliability for the region, and to consult with various governmental agencies and other entities in making its determination. The scope of the proceeding does not include issues with respect to air quality, public health, causation, culpability, or cost responsibility regarding the Aliso Canyon natural gas leak.

SB 826

In June 2016, SB 826 (a state appropriations bill) became law. Among other things, SB 826 requires allocation of funding to the California Council on Science and Technology to conduct an independent study, under the direction of the CPUC in consultation with the State Energy Resources Conservation and Development Commission, the CARB, and DOGGR, of operational safety and potential health risks, methane emissions, supply reliability for gas and electricity demand in the state, and the role of natural gas storage facilities and infrastructure in the state's long-term greenhouse gas reduction strategies. The study is to be completed by December 31, 2017.

SB 887

In September 2016, SB 887 became law, which establishes a framework for revising state regulations over natural gas storage wells in California. Among other things, the statute directs:

- CARB, in consultation with any local air district and DOGGR, to develop a natural gas storage facility continuous air monitoring program;
- DOGGR, in consultation with CARB, to determine by regulation what constitutes a reportable leak from a gas storage well and the timeframe for reporting those leaks;
- DOGGR to perform random onsite inspections of some gas storage wells annually and post the results on its website; and
- the operator of each natural gas storage well to develop and maintain a risk management plan, a comprehensive well training and mentoring program for employees whose job duties involve the safety of operations and maintenance of gas storage wells and associated equipment, and a leak prevention and response plan.

SB 888

In September 2016, SB 888 became law, which requires that a penalty assessed against a gas corporation by the CPUC with regard to a natural gas storage facility leak must at least equal the amount necessary to fully offset the impact on the climate from the greenhouse gases emitted by the leak, as determined by CARB. The CPUC also must consider the extent to which the gas corporation has mitigated or is in the process of mitigating the impact on the climate from greenhouse gas emissions resulting from the leak.

Proposed Legislation – SB 57

As currently drafted, proposed legislation SB 57 would extend the moratorium on natural gas injections at the Aliso Canyon storage facility until the root cause analysis of the leak that started in October 2015 has been completed. It would further require the CPUC to complete by the end of 2017 its analysis regarding the feasibility of minimizing or eliminating the use of the Aliso Canyon storage facility. If adopted, this legislation could delay the resumption of injection operations at the Aliso Canyon facility, and natural gas reliability and electric generation could be jeopardized.

Additional Safety Enhancements

In February 2017, SoCalGas notified the CPUC that it is accelerating its well integrity assessments on the natural gas storage wells at its La Goleta, Honor Rancho and Playa del Rey natural gas storage fields consistent with the testing prescribed by SB 380 for Aliso Canyon, proposed new DOGGR regulations, and SoCalGas' Storage Risk Management Plan. All of SoCalGas' operating natural gas storage wells will be reconfigured such that natural gas will be injected or produced only through the interior metal tubing and not through the annulus between the tubing and the well casing to maintain a double barrier and additional layer of safety, which is consistent with the direction of federal and state regulations. SoCalGas anticipates that this work will reduce the injection and withdrawal capacity of each of these storage fields. Depending on the volume of natural gas in storage in each field at the time natural gas is injected or withdrawn, the reduction could be significant and could jeopardize natural gas reliability and associated dependencies, such as electric generation.

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, 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.

CALIFORNIA UTILITIES – JOINT MATTERS

Natural Gas Pipeline Operations Safety Assessments

In August 2011, the California Utilities filed implementation plans with the CPUC to implement the CPUC's significant and urgent safety directive to test or replace natural gas transmission pipelines that have not been pressure tested and to reduce the time for valves to stop the flow of gas if a break in a pipeline occurs (Pipeline Safety Enhancement Plan or PSEP). In June 2014, the CPUC issued a final decision approving the utilities' model for implementing PSEP, and established the 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. The CPUC approved a decision tree process that SoCalGas and SDG&E have utilized to define and develop projects. While the decision tree provides the roadmap for this large scale testing or replacing of pipelines, the extensive scope of this project coupled with a very short time frame resulted in imprecise cost forecasts. As portions of PSEP have been completed, actual costs have generally been higher than original estimates, partially offset by changes in scope that have reduced estimated costs. Over time, cost estimate accuracy is improving, as well as efficiencies in executing the project work. We expect cost estimates for future work to be updated to reflect the development of more detailed estimates, actual cost experience as portions of the work are completed and additional refinement in scope. In addition, we anticipate that portions of the future work may be impacted by clarification of new safety regulations that could materially impact these projects' cost estimates.

The costs associated with our PSEP projects were outside the scope of the 2012 and 2016 GRC proceedings, and therefore recovery of these costs is subject to separate regulatory proceedings. However, a portion of future PSEP costs may be addressed in subsequent GRCs, as we discuss below. In addition, certain PSEP component projects and their corresponding cost estimates may be subject to future CPUC filings. We expect that addressing future PSEP projects in separate filings, including GRC filings, should help improve the certainty of cost recovery for the PSEP program.

In August 2016, the CPUC issued a final decision authorizing SoCalGas and SDG&E to recover, subject to refund pending reasonableness reviews:

- 50 percent of the revenue requirements associated with completed PSEP Phase 1 projects;
- authorized tracking of Phase 2 costs;
- file two reasonableness review applications for Phase 1 projects completed through 2017;
- file a Phase 2 revenue requirement forecast application for costs to be incurred in 2017 and 2018; and

- include all other PSEP costs not subject to prior applications in their 2019 GRC applications and any future GRCs.

In September 2016, SoCalGas and SDG&E filed a joint application with the CPUC for its second PSEP reasonableness review and rate recovery of costs of certain pipeline safety projects completed by June 30, 2015 and recorded in their authorized regulatory accounts. The total costs submitted for review are \$195 million; \$180 million for SoCalGas and \$15 million for SDG&E. SoCalGas and SDG&E expect a decision from the CPUC in 2018. This proceeding has been challenged by consumer advocacy groups, including the ORA, TURN, and the Southern

California Generation Coalition (SCGC). However, we believe these costs were prudent, were incurred in accordance with the program, and should be substantially approved for recovery.

As shown in the table below, SoCalGas and SDG&E have made significant pipeline safety investments under this program, and SoCalGas expects to continue making significant investments as approved through various regulatory proceedings. SDG&E's PSEP program is expected to be substantially complete in 2017, with the exception of the Pipeline Safety & Reliability Project that is currently under regulatory review.

PIPELINE SAFETY ENHANCEMENT PLAN – REASONABLENESS REVIEW SUMMARY

(Dollars in millions)

	2011 through 2016			
	Total invested ⁽¹⁾	CPUC review completed ⁽²⁾	CPUC review pending ⁽³⁾	2018 recovery filing ^{(4)/(5)}
Sempra Energy Consolidated:				
Capital	\$1,232	\$ 8	\$134	\$1,090
Operation and maintenance	184	25	61	98
Total	\$1,416	\$33	\$195	\$1,188
SoCalGas:				
Capital	\$ 938	\$ 8	\$120	\$ 810
Operation and maintenance	176	25	60	91
Total	\$1,114	\$33	\$180	\$ 901
SDG&E:				
Capital	\$ 294	\$—	\$ 14	\$ 280
Operation and maintenance	8	—	1	7
Total	\$ 302	\$—	\$ 15	\$ 287

⁽¹⁾ Excludes disallowed costs through December 31, 2016 of \$6 million at SoCalGas and \$1 million at SDG&E for pressure testing or replacing pipelines installed between January 1, 1956 and July 1, 1961.

⁽²⁾ Approved in December 2016; excludes \$2 million of PSEP-specific insurance costs for which recovery may be requested in a future filing.

⁽³⁾ Reasonableness Review Application filed in September 2016; decision pending.

⁽⁴⁾ Reasonableness Review Application to be filed in late 2018 and expected to include substantially all of these costs. Remaining costs not included in the 2018 application are expected to be filed in a future GRC.

⁽⁵⁾ Authorized to recover 50 percent of the revenue requirement when the projects are completed, subject to refund.

Cost of Capital Update

On February 7, 2017, SDG&E, SoCalGas, PG&E and Edison (collectively, the Joint Investor-Owned Utilities or Joint IOUs), along with the ORA and TURN, entered into a memorandum of understanding and filed a joint petition for modification (PFM) with the CPUC seeking a two-year extension for each of the Joint IOUs to file its next respective cost of capital application, extending the date to file the next cost of capital application from April 2017 to April 2019 for a 2020 test year. In addition to the two-year extension of the deadline to file the next cost of capital application, the memorandum of understanding contains provisions to reduce the Return on Equity (ROE) for SDG&E from 10.30 percent to 10.20 percent and for

SoCalGas from 10.10 percent to 10.05 percent, effective from January 1, 2018 through December 31, 2019. SDG&E's and SoCalGas' ratemaking capital structures will remain at the current levels until modified, if at all, by a future cost of capital decision by the CPUC. Also, the Joint IOUs will update their cost of capital for actual cost of long-term debt through August 2017 and forecasted cost through 2018, and update preferred stock costs for anticipated issuances (if any) through 2018. The cost of capital adjustment mechanism (CCM) will be in effect to adjust 2019 cost of capital, if necessary. Unless changed by the operation of the CCM, the updated costs of long-term debt and preferred stock (if applicable) and new ROEs will remain in effect through December 31, 2019. The PFM is subject to final approval by the CPUC.

If and once adopted, the Joint IOUs would submit their individual updated cost of capital and corresponding revenue requirement impacts to the CPUC in September 2017 to become effective January 1, 2018. While the actual changes to the revenue requirements resulting from the PFM would not be known until the above-mentioned filing is submitted and the actual cost of debt through August 2017 and forecasted cost through 2018 is quantified in the third quarter of 2017, SDG&E and SoCalGas estimate that the reductions in their annual revenues requirements will be within a range of \$16 million to \$24 million and \$44 million to \$52 million, respectively, beginning in 2018. These revenue requirement impacts are primarily related to the estimated impact of resetting the cost of debt, which would also occur in the normal course of a litigated cost of capital proceeding if the PFM is not approved by the CPUC. We provide further detail regarding cost of capital in Note 14 of the Notes to Consolidated Financial Statements.

Regulatory Compliance and Safety Enforcement

The California Utilities are subject to various state and federal regulatory compliance requirements. At the state level, the CPUC has instituted gas and electric safety compliance programs that delegate citation authority to CPUC staff personnel under the direction of the CPUC Executive Director. In exercising the citation authority, the CPUC staff will 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.

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, with an administrative limit of \$8 million per citation.

In May 2016, the CPUC's Safety and Enforcement Division issued a citation to SoCalGas for violation of General Order 112, resulting in a \$2 million penalty that was subsequently paid. The citation is associated with findings from two 2015 audits of SoCalGas' Southeast Region for failure to promptly remediate corrosion issues in accordance with federal regulations.

In October 2016, SoCalGas was fined \$699,500 for alleged violations of certain environmental mitigation measures related to the Aliso Canyon Turbine Replacement Project. SoCalGas has appealed the citation, and a CPUC ruling on the appeal is expected in 2017.

Future Risk-Based GRC

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. The framework is intended to assist the utilities, interested parties and the CPUC in evaluating energy utility proposals for assessing safety risks and the utilities' plans to manage, mitigate and minimize such risks. As a result, there will be two new proceedings, the Safety Model Assessment Proceeding and the Risk Assessment Mitigation Phase, both of which will occur prior to filing future GRC applications. In the Safety Model Assessment Proceeding, the California Utilities will demonstrate the models they use to prioritize and mitigate risks in order for the CPUC to establish guidelines and standards for these models. The California Utilities filed the first Risk Assessment Mitigation Phase report in November 2016, in advance of their next GRC, which is scheduled to be filed in 2017 and will address their operations and revenue requirements for 2019 through 2021. In the Risk Assessment Mitigation Phase, the California Utilities addressed 11 safety risks at SoCalGas and 17 safety risks at SDG&E potentially impacting the public, customers and employees. Each risk was addressed with a proposed mitigation plan that will be included by the California Utilities in their upcoming GRC applications, including the costs associated with these safety mitigation programs. In the future, both proceedings will precede and inform the California Utilities' GRC applications. The framework of both proceedings is still in the developing stages, therefore we are not able to determine whether the new framework will impact costs differently in the future or if risk mitigation costs will be sufficiently funded in rates.

SEMPRA SOUTH AMERICAN UTILITIES

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.

The National Energy Commission (Comisión Nacional de Energía, or CNE) in Chile and the Energy and Mining Investment Supervisory Body (Organismo Supervisor de la Inversión en Energía y Minería, or OSINERGMIN) in Peru set rates for our electric distribution utilities in South America, Chilquinta Energía and Luz del Sur, respectively.

For Chilquinta Energía, rates for four-year periods related to distribution and sub-transmission are reviewed separately on an alternating basis every two years. The most recent review process for distribution rates was completed in November 2016, covering the period from November 2016 through October 2020. We expect a final decree to be released during the first quarter of 2017 and to be retroactive from

November 2016, which we do not expect to have a material impact on our results. We expect the next review process for sub-transmission rates to be completed by the end of 2017, covering the period from January 2018 through December 2019.

The components of tariffs for Luz del Sur are reviewed and adjusted every four years. The final distribution rate-setting resolution for the 2013-2017 period was published in October 2013 and went into effect on November 1, 2013. In December 2016, the Peruvian regulator issued a decree extending existing rates for Luz del Sur until November 2018. The next rate review is scheduled to be completed in 2018, covering the period from November 2018 to October 2022.

We discuss the impact of tax reform in Chile and Peru in “Results of Operations – Changes in Revenues, Costs and Earnings – Income Taxes.”

SEMPRA MEXICO

Sempra Mexico is expected to provide earnings from infrastructure projects, joint venture investments and its natural gas distribution utility. We expect working capital and capital expenditure requirements, projects, joint venture investments and dividends in Mexico to be funded by cash generated from Mexico business operations, credit facilities, equity and debt issuances, project financing, interim funding from the parent, and partnering in joint ventures.

Energía Costa Azul LNG Terminal

In May 2015, Sempra LNG & Midstream, IEnova, and a subsidiary of PEMEX entered into a project development agreement for the joint development of the proposed natural gas liquefaction project at IEnova’s existing regasification terminal at Energía Costa Azul. The agreement specifies how the parties will share costs, and establishes a framework for the parties to work jointly on permitting, design, engineering and commercial activities associated with exploring the development of the liquefaction project. We are sharing costs with PEMEX on the development efforts, and have started to apply for the primary governmental authorizations for the project. Energía Costa Azul has profitable long-term regasification contracts for 100 percent of the facility, 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.

Development of this project is subject to numerous risks and uncertainties, including the receipt of a number of permits and regulatory approvals; finding suitable partners and

customers; obtaining financing; negotiating and completing suitable commercial agreements, including joint venture agreements, tolling capacity agreements and construction contracts; reaching a final investment decision; and other factors associated with this potential investment. For a discussion of these risks, see “Risk Factors” in our 2016 Annual Report on Form 10-K.

Termoeléctrica de Mexicali

Our results related to our TdM power plant, currently held for sale, are affected by market conditions, as it is currently operating on a merchant basis. TdM sells its power into the California market based on market conditions at the time of sale.

Other Sempra Mexico Matters

In November 2015, a major U.S. credit rating agency revised PEMEX’s global foreign currency and local currency credit ratings from A3 to Baa1 and changed the outlook for its credit ratings to negative. In March 2016, the same major credit rating agency further downgraded PEMEX’s global foreign currency and local currency credit ratings from Baa1 to Baa3. In May, October and December 2016, in connection with debt offerings by PEMEX, the same major credit rating agency reaffirmed that the outlook on PEMEX’s credit ratings remains negative. PEMEX is also subject to the control of the Mexican government, which could limit its ability to satisfy its external debt obligations. Although PEMEX is a State Productive Enterprise of Mexico, its financing obligations are not guaranteed by the Mexican government. As both a partner in the DEN joint venture and a customer with capacity contracts for transportation services on Sempra Mexico’s ethane and LPG pipelines, if PEMEX were unable to meet any or all of its obligations to Sempra Mexico, it could have a material adverse effect on Sempra Energy’s financial condition, results of operations and cash flows.

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 pipeline projects, like other major construction projects, is subject to a number of risks and uncertainties. IEnova’s completed acquisitions of the remaining equity interest in GdC and of the Ventika wind power facilities will subject IEnova to substantial integration challenges and risks. For a discussion of these risks and uncertainties, see “Risk Factors” in our 2016 Annual Report on Form 10-K.

SEMPRA RENEWABLES

Sempra Renewables' performance is primarily a function of the solar and wind 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.

Sempra Renewables' future performance and the demand for renewable energy is impacted by various market factors, most notably state mandated requirements for utilities to deliver a portion of total energy load from renewable energy sources. Additionally, the phase out or extension of U.S. federal income tax incentives, primarily investment tax credits and PTCs, and grant programs could significantly impact future renewable energy resource availability and investment decisions.

SEMPRA LNG & MIDSTREAM

Cameron LNG JV Three-Train Liquefaction Project

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. As noted above, 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, Cameron LNG JV could be required to engage a substitute contractor, which would result in further project delays and potentially significantly increased costs. In addition, the EPC contractor has indicated that the project is facing delays, which will delay income anticipated in 2018 and 2019. For a discussion 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 "Risk Factors" in our 2016 Annual Report on Form 10-K.

Proposed Additional Cameron Liquefaction Expansion

Cameron LNG JV has received the major permits necessary to expand the current configuration 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). Advancement of the project includes

- DOE FTA approval received in July 2015
- Non-FTA approval received in July 2016
- FERC permit received in May 2016

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. One of the partners indicated to Sempra Energy and the other partners that it does not intend to invest additional capital in Cameron LNG JV with respect to the expansion. As a result, discussions among the partners are taking place, and we are considering a variety of options to attempt to move this project forward. These activities have contributed to delays in developing firm pricing information and securing customer commitments. In light of these developments, we are unable to predict when we and/or Cameron LNG JV might receive the consents and approvals required to move forward on this 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 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 "Risk Factors" in our 2016 Annual Report on Form 10-K.

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 Energía Costa Azul 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

In November 2016, Sempra LNG & Midstream submitted a request to the FERC seeking authorization to site, construct and operate the proposed Port Arthur LNG natural gas liquefaction and export facility in Port Arthur, Texas.

- The proposed project is designed to include
 - two natural gas liquefaction trains with production capability of approximately 13.5 Mtpa, or 698 Bcf per year;
 - three LNG storage tanks;

- natural gas liquids and refrigerant storage;
 - feed gas pre-treatment facilities; and
 - two berths and associated marine and loading facilities.
- In June 2015, Sempra LNG & Midstream filed permit applications with the DOE for authorization to export the LNG produced from the proposed 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.
 - In February 2016, Sempra LNG & Midstream and Woodside Petroleum Ltd. entered into a project development agreement for the joint development of the proposed Port Arthur LNG liquefaction project. The agreement specifies how the parties will share costs, and establishes a framework for the parties to work jointly on permitting, design, engineering, commercial and marketing activities associated with developing the Port Arthur LNG liquefaction project.

Also in November 2016, Sempra LNG & Midstream filed a permit application with the FERC for a pipeline project that will provide natural gas transportation service for the liquefaction facility project.

Development of the Port Arthur LNG liquefaction project is subject to a number of risks and uncertainties, including completing the required commercial agreements, such as joint venture agreements, tolling capacity agreements or gas supply and LNG sales 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 “Risk Factors” in our 2016 Annual Report on Form 10-K.

Energía Costa Azul

We further discuss Sempra LNG & Midstream’s participation in potential LNG liquefaction development at Sempra Mexico’s Energía Costa Azul facility above in “Sempra Mexico – Energía Costa Azul LNG Terminal.”

Natural Gas Storage Assets

The future performance of our natural gas storage assets could be impacted by changes in the U.S. natural gas market, which could lead to sustained diminished natural gas storage values.

The recorded value of our long-lived natural gas storage assets at December 31, 2016 is \$1.5 billion. Historically, the value of natural gas storage services has positively correlated with the difference between the seasonal prices of natural gas, among other factors. In general, over the past several years, seasonal differences in natural gas prices have

declined, which have contributed to lower prices for storage services. As our legacy (higher rate) sales contracts mature at our Bay Gas Storage Company, Ltd. and Mississippi Hub facilities, replacement sales contract rates have been and could continue to be lower than has historically been the case. Lower sales revenues may not be offset by cost reductions, which could lead to further depressed asset values. In addition, our LA Storage development project may be unable to attract cash flow commitments sufficient to support further investment or to extend its FERC construction permit beyond the current expiration date of June 2017. The LA Storage project also includes an existing 23.3-mile pipeline header system, the LA Storage pipeline, that is not currently contracted.

We perform recovery testing of our recorded asset values when market conditions indicate that such values may not be recoverable. In the event such values are not recoverable, we would consider the fair value of these assets relative to their recorded value. To the extent the recorded (carrying) value is in excess of the fair value, we would record a noncash impairment charge. A significant impairment charge related to our natural gas storage assets would have a material adverse effect on our results of operations in the period in which it is recorded.

RBS SEMPRÁ COMMODITIES

In three separate transactions in 2010 and one in early 2011, we and The Royal Bank of Scotland plc (RBS), our partner in the RBS Sempra Commodities joint venture, sold substantially all of the businesses and assets of our commodities-marketing partnership. The investment balance of \$67 million at December 31, 2016 reflects remaining distributions expected to be received from the partnership as it is dissolved. The amount of distributions, if any, may be impacted by the matters we discuss related to RBS Sempra Commodities in “Other Litigation” in Note 15 of the Notes to Consolidated Financial Statements. In addition, amounts may be retained by the partnership for an extended period of time to help offset unanticipated future general and administrative costs necessary to complete the dissolution of the partnership.

OTHER SEMPRÁ ENERGY MATTERS

We may be further 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 “Management’s Discussion and Analysis – Impact of Foreign Currency and Inflation Rates on Results of

Operations” above and in “Market Risk” below. 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 export initiatives. For a discussion of these risks and other risks involving changing commodity prices, see “Risk Factors” in our 2016 Annual Report on Form 10-K.

There are currently various proposals to reform the U.S. federal tax code. Some of the provisions of potential reforms being considered include

- lowering the federal income tax rate,
- eliminating the deduction for interest expense,
- treating all capital expenditures as a current deduction,
- implementing a territorial tax system, allowing for future foreign earnings to be repatriated with reduced or no federal income tax expense, and
- adding a border adjustment tax where profits from exports are tax-exempt, while imports are taxed.

Due to the uncertainty as to whether or how these or other reforms would be formulated or enacted, and how they would be applied, it is difficult to predict how each of our individual businesses or Sempra Energy overall might be impacted. These reforms, or any others that may be enacted, could change the forecasted effective income rates that we discuss in “Changes in Revenues, Costs and Earnings – Income Taxes” above. Our businesses also may be impacted by changes currently under consideration at the federal level in foreign and domestic trade policies and laws, including border tariffs and revisions to international trade agreements and import and export policies. Any such changes could impact our ability to export or import materials, equipment and commodities, increase costs and reduce our competitiveness. For a discussion of these risks and other risks involving changing commodity prices, see “Risk Factors” in our 2016 Annual Report on Form 10-K.

In July 2010, federal legislation to reform financial markets was enacted that significantly alters how over-the-counter (OTC) derivatives are regulated, which may impact all of our businesses. The law increased regulatory oversight and transparency requirements of OTC energy derivatives, including

- requiring standardized OTC derivatives to be traded on registered exchanges regulated by the U.S. Commodity Futures Trading Commission (CFTC)
- imposing new and potentially higher capital and margin requirements and

- authorizing the establishment of commodity position limits, the latter of which is pending final approval.

The law gives the CFTC authority to exempt end users of energy commodities which could reduce, but not eliminate, the applicability of these measures to us and other end users. These requirements could cause our OTC transactions to be more costly but are not expected to have a material effect on our liquidity due to additional capital requirements. In addition, as these reforms aim to standardize OTC products, they could limit the effectiveness and extent of our hedging programs, because we would have less ability to tailor OTC derivatives to match the precise risk we are seeking to mitigate and may be restricted on the size of our hedging program.

LITIGATION

We describe legal proceedings that could adversely affect our future performance in Note 15 of the Notes to Consolidated Financial Statements.

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 Value at Risk (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. Any costs or gains/losses associated with the use of power and natural gas derivatives are considered to be commodity costs. Commodity costs are generally passed on to customers as incurred. However, SoCalGas is subject to incentive mechanisms that reward or penalize the utility for commodity costs below or above certain benchmarks.

We discuss revenue recognition in Note 1 and the additional market-risk information regarding derivative instruments in Note 9 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, 2016 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 power purchase agreements. 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, 2016 and 2015. 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' gas cost incentive mechanism. 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, 2016, 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 costs of borrowing.

The table below shows the nominal amount of long-term debt:

NOMINAL AMOUNT OF LONG-TERM DEBT⁽¹⁾						
<i>(Dollars in millions)</i>						
	December 31, 2016			December 31, 2015		
	Sempra Energy Consolidated	SDG&E	SoCalGas	Sempra Energy Consolidated	SDG&E	SoCalGas
Utility fixed-rate	\$7,218	\$4,209	\$3,009	\$6,362	\$3,849	\$2,513
Utility variable-rate	445	445	—	455	455	—
Non-utility fixed-rate	6,703	—	—	6,780	—	—
Non-utility variable-rate	719	—	—	166	—	—

⁽¹⁾ Before the effects of interest rate swaps, 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. If interest rates changed by ten percent on all of Sempra Energy's effective variable-rate, long-term debt at December 31, 2016, the change in earnings over the next 12 months would be \$11 million for the period ending December 31, 2017, including \$8 million at SDG&E. These hypothetical changes in earnings are based on our long-term debt position after the effect of interest rate swaps.

We provide further information about interest rate swap transactions in Note 9 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 nuclear decommissioning trusts. 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 of our counterparties' 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
- downgrade triggers

We believe that we have provided adequate reserves for counterparty nonperformance.

When its development projects become operational, Sempra Infrastructure 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 base our decision to go forward on development projects on these 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 2016. At December 31, 2016, Sempra Energy's senior unsecured debt rating remained at Baa1 with a stable outlook and SDG&E's and SoCalGas' senior unsecured debt rating remained at A1 with a stable outlook.

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 basis points, depending on the severity of the downgrade. The commitment fee on available unused credit would also increase 5 to 10 basis points, depending on the severity of the downgrade.

Under these committed lines, if SDG&E or 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 basis points, depending on the severity of the downgrade. The commitment fee on available unused credit would also increase 2.5 to 5 basis points, depending on the severity of the downgrade.

For Sempra Energy and SDG&E, their credit ratings may affect credit limits related to derivative instruments, as we discuss in Note 9 of the Notes to Consolidated Financial Statements.

FOREIGN CURRENCY AND INFLATION RATE RISK

We discuss our foreign currency and inflation exposure above in “Results of Operations—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 2016 earnings to U.S. dollars ⁽¹⁾	\$ (15)
Transactional exposure, before the effects of foreign currency derivatives ⁽²⁾	54
Translation of net assets of foreign subsidiaries and investment in foreign entities ⁽³⁾	(168)

⁽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, 2016 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, 2016 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. Historically, Mexican inflation has remained below five percent. Based on a net monetary liability position of \$2.3 billion, including those related to our investments in joint ventures, at December 31, 2016, the hypothetical effect of a five-percent increase in the Mexican inflation rate is approximately \$23 million lower earnings as a result of higher income tax expense for our consolidated subsidiaries, as well as lower equity earnings for our joint ventures.

Impacts Related to GdC and Ventika Acquisitions

Similar to our current Mexican operations, GdC and Ventika’s functional currency is the U.S. dollar, and its assets are covered by long-term, U.S. dollar-based contracts. Due to the acquisitions of the remaining 50-percent interest in GdC and Ventika by Sempra Mexico, which we discuss in Note 3 of the Notes to Consolidated Financial Statements, our exposure to foreign currency rate risk has increased and could have a material impact on our Mexican income tax expense, particularly due to translation of deferred income tax balances.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES, AND KEY NONCASH PERFORMANCE INDICATORS

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.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

SEMPRA ENERGY, SDG&E AND SOCIALGAS

CONTINGENCIES

Assumptions & Approach Used	<p>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:</p> <ul style="list-style-type: none"> ▪ 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. <p>We do not accrue contingencies that might result in gains. We continuously assess contingencies for litigation claims, environmental remediation and other events.</p>
Effect if Different Assumptions Used	Details of our issues in this area are discussed in Note 15 of the Notes to Consolidated Financial Statements.

REGULATORY ACCOUNTING

Assumptions & Approach Used	<p>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:</p> <ul style="list-style-type: none"> ▪ changes in the regulatory and political environment or the utility's competitive position ▪ issuance of a regulatory commission order ▪ passage of new legislation <p>To the extent that circumstances associated with regulatory balances change, the regulatory balances are evaluated and adjusted if appropriate.</p>
Effect if Different Assumptions Used	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, 13, 14 and 15 of the Notes to Consolidated Financial Statements.

SEMPRA ENERGY, SDG&E AND SOCALGAS (CONTINUED)

INCOME TAXES

<p>Assumptions & Approach Used</p>	<p>Our income tax expense and related balance sheet amounts involve significant management estimates and judgments. 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</p> <ul style="list-style-type: none"> ▪ past resolutions of the same or similar issue ▪ the status of any income tax examination in progress ▪ positions taken by taxing authorities with other taxpayers with similar issues <p>The likelihood of deferred tax recovery is based on analyses of the deferred tax assets and our expectation of future taxable income, based on our strategic planning.</p>
<p>Effect if Different Assumptions Used</p>	<p>Actual income taxes could vary from estimated amounts because of:</p> <ul style="list-style-type: none"> ▪ future impacts of various items, including changes in tax laws, regulations, interpretations and rulings ▪ our financial condition in future periods ▪ the resolution of various income tax issues between us and taxing and regulatory authorities <p>We discuss details of our issues in this area in Note 6 of the Notes to Consolidated Financial Statements.</p>
<p>Assumptions & Approach Used</p>	<p>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.</p>
<p>Effect if Different Assumptions Used</p>	<p>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.</p> <p>We discuss additional information related to accounting for uncertainty in income taxes in Note 6 of the Notes to Consolidated Financial Statements.</p>

DERIVATIVES

<p>Assumptions & Approach Used</p>	<p>We record derivative instruments at fair value on the balance sheet. Depending on the purpose for the contract and the applicability of hedge accounting, the impact of instruments may be offset in earnings, on the balance sheet, or in other comprehensive income. We also use normal purchase or sale accounting for certain contracts. As discussed elsewhere in this report, 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</p> <ul style="list-style-type: none"> ▪ events specific to a given counterparty ▪ the tenor of the transaction ▪ the credit-worthiness of the counterparty
<p>Effect if Different Assumptions Used</p>	<p>The application of hedge accounting to certain derivatives and the normal purchase or sale accounting election are made on a contract-by-contract basis. Using hedge accounting or the normal purchase or sale election in a different manner could materially impact Sempra Energy’s results of operations. However, such alternatives would not have a significant impact on the California Utilities’ results of operations because regulatory accounting principles generally apply to their contracts. We provide details of our derivative financial instruments in Note 9 of the Notes to Consolidated Financial Statements.</p>

SEMPRA ENERGY, SDG&E AND SOCALGAS (CONTINUED)

DEFINED BENEFIT PLANS

<p>Assumptions & Approach Used</p>	<p>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.</p> <p>The critical assumptions used to develop the required estimates include the following key factors:</p> <ul style="list-style-type: none"> ▪ 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) ▪ lump sum interest rates
<p>Effect if Different Assumptions Used</p>	<p>The actuarial assumptions we use may differ materially from actual results due to:</p> <ul style="list-style-type: none"> ▪ 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 ▪ retirement rates <p>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 postretirement benefit expense we record. For plans other than those at the California Utilities, the approximate annual effect on earnings of a 100 basis point increase or decrease in the assumed discount rate would be less than \$2 million and the effect of a 100 basis point increase or decrease in the assumed rate of return on plan assets would be less than \$2 million.</p> <p>We provide additional information, including the impact of increases and decreases in the health care cost trend rate, in Note 7 of the Notes to Consolidated Financial Statements.</p>

SEMPRA ENERGY AND SDG&E

ASSET RETIREMENT OBLIGATIONS

<p>Assumptions & Approach Used</p>	<p>SDG&E's legal asset retirement obligations (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</p> <ul style="list-style-type: none"> ▪ 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 ▪ actual decommissioning costs, progress to date and expected duration of decommissioning activities
<p>Effect if Different Assumptions Used</p>	<p>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 Nuclear Decommissioning Trusts.</p> <p>We provide additional detail in Notes 13 and 15 of the Notes to the Consolidated Financial Statements.</p>

SEMPRA ENERGY

IMPAIRMENT TESTING OF LONG-LIVED ASSETS, INCLUDING INTANGIBLE ASSETS

Assumptions & Approach Used	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 cost 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.
Effect if Different Assumptions Used	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

Assumptions & Approach Used	<p>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 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</p> <ul style="list-style-type: none"> ▪ consideration of market transactions ▪ future cash flows ▪ the appropriate risk-adjusted discount rate ▪ country risk ▪ entity risk
Effect if Different Assumptions Used	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. Based on our qualitative assessment, we determined that it is more likely than not that the estimated fair values of the reporting units to which goodwill was allocated exceeded their carrying values as of October 1, 2016, our most recent goodwill impairment testing date. We discuss goodwill in Note 1 of the Notes to Consolidated Financial Statements.

SEMPRA ENERGY (CONTINUED)

CARRYING VALUE OF EQUITY METHOD INVESTMENTS

<p>Assumptions & Approach Used</p>	<p>We generally account for investments under the equity method when we have significant influence over, but do not have control of, the investee.</p> <p>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 cost 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 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</p> <ul style="list-style-type: none"> ▪ 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 liquefied natural gas ▪ competing fuels (primarily propane) and electricity ▪ estimated future power generation and associated tax credits ▪ renewable power price expectations
<p>Effect if Different Assumptions Used</p>	<p>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 cost, 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.</p> <p>We provide additional details in Notes 4 and 10 of the Notes to Consolidated Financial Statements.</p>

KEY NONCASH PERFORMANCE INDICATORS

A discussion of key noncash performance indicators related to each segment follows.

California Utilities

Key noncash performance indicators include number of customers, natural gas volumes transported and sold and electricity sold. Additional noncash performance indicators include goals related to safety, customer service, customer reputation, environmental considerations (including quantities of renewable energy purchases), on-time and on-budget completion of major projects and initiatives, and service reliability. We discuss natural gas volumes and electricity sold in “Results of Operations – Changes in Revenues, Costs and Earnings” above.

Sempra South American Utilities

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

Sempra Mexico

Key noncash performance indicators for Sempra Mexico include natural gas sales volume, facility availability, capacity utilization and, for its distribution operations, customer count and consumption. Additional noncash performance indicators include obtaining and completing major projects and goals related to safety, environmental considerations and regulatory performance.

Sempra LNG & Midstream

Key noncash performance indicators at Sempra LNG & Midstream include natural gas sales volume, facility availability and capacity utilization. Additional noncash performance indicators include goals related to safety, environmental considerations and regulatory compliance.

Electric Generation Facilities (Sempra Mexico and Sempra Renewables)

Key noncash performance indicators include capacity factors, plant availability and sales volume at our renewable energy facilities. For competitive reasons, we do not disclose capacity factors and plant availability. Additional noncash performance indicators include goals related to safety, environmental considerations, and compliance with reliability standards.

LNG Facilities (Sempra Mexico and Sempra LNG & Midstream)

Key noncash performance indicators include plant availability and capacity utilization. Additional noncash performance indicators include goals related to safety, environmental considerations, regulatory compliance, and on-time and on-budget completion of development projects.

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.

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 upon assumptions with respect to the future, involve risks and uncertainties, and are not guarantees of performance. 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,” “potential,” “possible,” “proposed,” “target,” “pursue,” “outlook,” “maintain,” or similar expressions, or when we discuss our guidance, strategy, plans, goals, 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 forward-looking statements include

- actions and the timing of actions, including decisions, new regulations, and issuances of permits and other authorizations by the California Public Utilities Commission, U.S. Department of Energy, California Division of Oil, Gas, and Geothermal Resources, Federal Energy Regulatory Commission, U.S. Environmental Protection Agency, Pipeline and Hazardous Materials Safety Administration, Los Angeles County Department of Public Health, states, cities and counties, and other regulatory and governmental bodies in the United States and other countries in which we operate;
- the timing and success of business development efforts and construction projects, including risks in obtaining or maintaining permits and other authorizations on a timely basis, risks in completing construction projects on schedule and on budget, and risks in obtaining the consent and participation of partners;
- the resolution of civil and criminal litigation and regulatory investigations;
- deviations from regulatory precedent or practice that result in a reallocation of benefits or burdens among shareholders and ratepayers; modifications of settlements; and delays in, or disallowance or denial of, regulatory agency authorizations to recover costs in rates from customers (including with respect to regulatory assets associated with the San Onofre Nuclear Generating Station

facility and 2007 wildfires) or regulatory agency approval for projects required to enhance safety and reliability;

- the availability of electric power, natural gas and liquefied natural gas, and natural gas pipeline and storage capacity, including disruptions caused by failures in the transmission grid, moratoriums on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures;
- changes in energy markets; volatility in commodity prices; moves to reduce or eliminate reliance on natural gas; and the impact on the value of our investment in natural gas storage and related assets from low natural gas prices, low volatility of natural gas prices and the inability to procure favorable long-term contracts for storage services;
- risks posed by actions of third parties who control the operations of our investments, and risks that our partners or counterparties will be unable or unwilling to fulfill their contractual commitments;
- weather conditions, natural disasters, accidents, equipment failures, explosions, terrorist attacks and other events that disrupt our operations, damage our facilities and systems, cause the release of greenhouse gases, radioactive materials and harmful emissions, cause wildfires 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) or may be disputed by insurers;
- 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;
- the ability to win competitively bid infrastructure projects against a number of strong and aggressive competitors;
- capital markets and economic conditions, including the availability of credit and the liquidity of our investments; fluctuations in inflation, interest and currency exchange rates and our ability to effectively hedge the risk of such fluctuations;
- changes in the tax code as a result of potential federal tax reform, such as the elimination of the deduction for interest and non-deductibility of all, or a portion of, the cost of imported materials, equipment and commodities;
- changes in foreign and domestic trade policies and laws, including border tariffs, revisions to favorable international trade agreements, and changes that make our exports less competitive or otherwise restrict our ability to export;
- expropriation of assets by foreign governments and title and other property disputes;

- the impact on reliability of San Diego Gas & Electric Company's (SDG&E) electric transmission and distribution system due to increased amount and variability of power supply from renewable energy sources;
- the impact on competitive customer rates due to the growth in distributed and local power generation and the corresponding decrease in demand for power delivered through SDG&E's electric transmission and distribution system and from possible departing retail load resulting from customers transferring to Direct Access and Community Choice Aggregation; 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 our 2016 Annual Report on Form 10-K and other reports that we file with the Securities and Exchange Commission.

COMMON STOCK DATA

SEMPRA ENERGY COMMON STOCK

Our common stock is traded on the New York Stock Exchange. At February 21, 2017, there were approximately 28,367 record holders of our common stock.

The following table shows Sempra Energy quarterly common stock data:

QUARTERLY COMMON STOCK DATA

	First quarter	Second quarter	Third quarter	Fourth quarter
2016				
Market price				
High	\$104.70	\$114.03	\$114.66	\$109.42
Low	\$ 86.72	\$100.40	\$102.15	\$ 92.95
2015				
Market price				
High	\$116.21	\$111.09	\$106.70	\$105.78
Low	\$104.64	\$ 98.67	\$ 89.44	\$ 90.52

We declared dividends of \$0.755 per share and \$0.70 per share in each quarter of 2016 and 2015, respectively. On February 23, 2017, our board of directors approved an increase to our quarterly common stock dividend to \$0.8225 per share (\$3.29 annually), an increase of \$0.0675 per share (\$0.27 annually) from \$0.755 per share (\$3.02 annually) authorized in February 2016.

SOCALGAS AND SDG&E COMMON STOCK

PE, a wholly owned subsidiary of Sempra Energy, owns all of SoCalGas' outstanding common stock. Enova, a wholly owned subsidiary of Sempra Energy, owns all of SDG&E's issued and outstanding common stock.

Information concerning dividend declarations for SoCalGas and SDG&E is included in their Statements of Changes in Shareholders' Equity and Statements of Changes in Equity, respectively, set forth in the Consolidated Financial Statements.

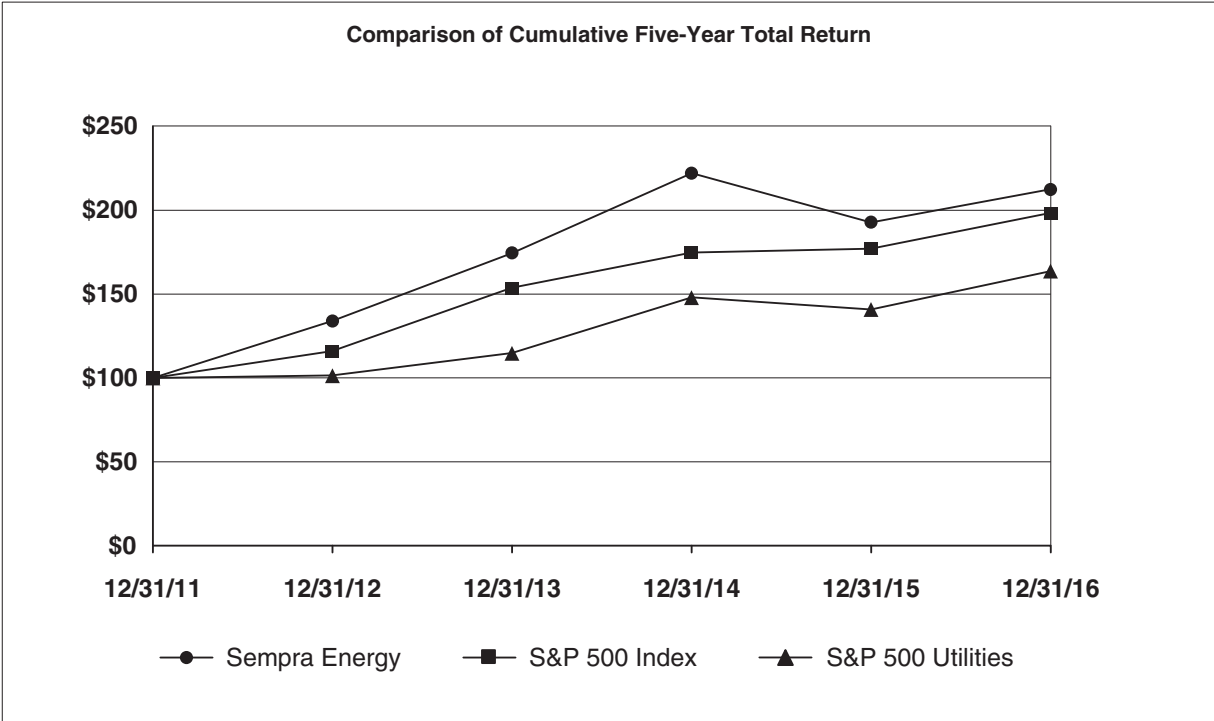
DIVIDEND RESTRICTIONS

The payment and the amount of future dividends for Sempra Energy, SDG&E, and SoCalGas are within the discretion of their boards of directors. The CPUC's regulation of the California Utilities' capital structures limits the amounts that the California Utilities can pay us in the form of loans and dividends. We discuss these matters in Note 1 of the Notes to the Consolidated Financial Statements in "Restricted Net Assets" and in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Capital Resources and Liquidity – Dividends."

PERFORMANCE GRAPH – COMPARATIVE TOTAL SHAREHOLDER RETURNS

The following graph compares the percentage change in the cumulative total shareholder return on Sempra Energy common stock for the five-year period ended December 31, 2016, with the performance over the same period of the Standard & Poor’s (S&P) 500 Index and the Standard & Poor’s 500 Utilities Index.

These returns were calculated assuming an initial investment of \$100 in our common stock, the S&P 500 Index and the S&P 500 Utilities Index on December 31, 2011, and the reinvestment of all dividends.



FIVE-YEAR SUMMARIES

The following tables present selected financial data of Sempra Energy, SDG&E and SoCalGas for the five years ended December 31, 2016. The data is derived from the audited consolidated financial statements of each company. You should read this information in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and notes contained in this Annual Report.

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				
	2016	2015	2014	2013	2012
Revenues					
Utilities:					
Electric	\$ 5,211	\$ 5,158	\$ 5,209	\$ 4,911	\$ 4,568
Natural gas	4,050	4,096	4,549	4,398	3,873
Energy-related businesses	922	977	1,277	1,248	1,206
Total revenues	<u>\$10,183</u>	<u>\$10,231</u>	<u>\$11,035</u>	<u>\$10,557</u>	<u>\$ 9,647</u>
Income from continuing operations	\$ 1,519	\$ 1,448	\$ 1,262	\$ 1,088	\$ 920
Earnings from continuing operations attributable to noncontrolling interests	(148)	(98)	(100)	(79)	(55)
Call premium on preferred stock of subsidiary	—	—	—	(3)	—
Preferred dividends of subsidiaries	(1)	(1)	(1)	(5)	(6)
Earnings/Income from continuing operations attributable to common shares	<u>\$ 1,370</u>	<u>\$ 1,349</u>	<u>\$ 1,161</u>	<u>\$ 1,001</u>	<u>\$ 859</u>
Attributable to common shares:					
Earnings/Income from continuing operations					
Basic	\$ 5.48	\$ 5.43	\$ 4.72	\$ 4.10	\$ 3.56
Diluted	\$ 5.46	\$ 5.37	\$ 4.63	\$ 4.01	\$ 3.48
Dividends declared per common share	\$ 3.02	\$ 2.80	\$ 2.64	\$ 2.52	\$ 2.40
Return on common equity	11.1%	11.7%	10.4%	9.4%	8.6%
Effective income tax rate	21%	20%	20%	26%	6%
Price range of common shares:					
High	\$114.66	\$116.21	\$116.30	\$ 93.00	\$ 72.87
Low	\$ 86.72	\$ 89.44	\$ 86.73	\$ 70.61	\$ 54.70
Weighted average rate base:					
SDG&E	\$ 8,019	\$ 7,671	\$ 7,253	\$ 7,244	\$ 6,295
SoCalGas	\$ 4,775	\$ 4,269	\$ 3,879	\$ 3,499	\$ 3,178
AT DECEMBER 31					
Current assets	\$ 3,110	\$ 2,891	\$ 4,184	\$ 3,997	\$ 3,695
Total assets	\$47,786	\$41,150	\$39,651	\$37,165	\$36,412
Current liabilities	\$ 5,927	\$ 4,612	\$ 5,069	\$ 4,369	\$ 4,258
Long-term debt (excludes current portion) ⁽¹⁾	\$14,429	\$13,134	\$12,086	\$11,174	\$11,534
Short-term debt ⁽²⁾	\$ 2,692	\$ 1,529	\$ 2,202	\$ 1,692	\$ 1,271
Contingently redeemable preferred stock of subsidiary ⁽³⁾	\$ —	\$ —	\$ —	\$ —	\$ 79
Sempra Energy shareholders’ equity	\$12,951	\$11,809	\$11,326	\$11,008	\$10,282
Common shares outstanding	250.2	248.3	246.3	244.5	242.4
Book value per share	<u>\$ 51.77</u>	<u>\$ 47.56</u>	<u>\$ 45.98</u>	<u>\$ 45.03</u>	<u>\$ 42.43</u>

⁽¹⁾ Includes capital lease obligations.

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

⁽³⁾ SDG&E redeemed all series of its outstanding shares of contingently redeemable stock in 2013.

In September 2016, Sempra Mexico recorded a \$350 million noncash gain associated with the remeasurement of our equity interest in GdC.

In 2016 and 2013, a Sempra Energy subsidiary, IEnova, completed private offerings in the U.S. and outside of Mexico and a concurrent public offering in Mexico of common stock. We discuss IEnova further in Note 1 of the Notes to Consolidated Financial Statements.

In October 2014, Cameron LNG JV, a joint venture between Sempra LNG & Midstream and its partners in the Cameron LNG liquefaction project, became effective. Sempra LNG & Midstream accounts for its investment in the joint venture under the equity method. We discuss Cameron LNG JV further in “Our Business” and “Factors Influencing Future Performance” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” above and in Notes 3 and 4 of the Notes to Consolidated Financial Statements.

In 2013, we recorded a \$119 million loss from plant closure related to SDG&E’s investment in SONGS. We discuss SONGS further in Note 13 of the Notes to Consolidated Financial Statements.

In 2012, we recorded \$239 million in impairment charges related to our investment in the Rockies Express joint venture. We discuss Rockies Express further in Notes 4 and 10 of the Notes to Consolidated Financial Statements.

We discuss litigation and other contingencies in Note 15 of the Notes to Consolidated Financial Statements.

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

(Dollars in millions)

	At December 31 or for the years then ended				
	2016	2015	2014	2013	2012
SDG&E:					
Statement of Operations Data:					
Operating revenues	\$ 4,253	\$ 4,219	\$ 4,329	\$ 4,066	\$ 3,694
Operating income	990	1,058	959	782	809
Dividends on preferred stock	—	—	—	4	5
Earnings attributable to common shares	570	587	507	404	484
Balance Sheet Data:					
Total assets	\$17,719	\$16,515	\$16,260	\$15,337	\$14,705
Long-term debt (excludes current portion) ⁽¹⁾	4,658	4,455	4,283	4,485	4,253
Short-term debt ⁽²⁾	191	218	611	88	16
Contingently redeemable preferred stock ⁽³⁾	—	—	—	—	79
SDG&E shareholder’s equity	5,641	5,223	4,932	4,628	4,222
SoCalGas:					
Statement of Operations Data:					
Operating revenues	\$ 3,471	\$ 3,489	\$ 3,855	\$ 3,736	\$ 3,282
Operating income	557	608	521	539	420
Dividends on preferred stock	1	1	1	1	1
Earnings attributable to common shares	349	419	332	364	289
Balance Sheet Data:					
Total assets	\$13,424	\$12,104	\$10,446	\$ 9,138	\$ 9,062
Long-term debt (excludes current portion) ⁽¹⁾	2,982	2,481	1,891	1,150	1,400
Short-term debt ⁽²⁾	62	9	50	294	4
SoCalGas shareholders’ equity	3,510	3,149	2,781	2,549	2,235

⁽¹⁾ Includes capital lease obligations.

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

⁽³⁾ SDG&E redeemed all series of its outstanding shares of contingently redeemable stock in 2013.

In 2013, SDG&E recorded a \$119 million loss from plant closure related to its investment in SONGS.

We discuss litigation and other contingencies in Note 15 of the Notes to Consolidated Financial Statements.

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 Securities and Exchange Commission and is accumulated and communicated to the management of each company, including each respective Chief Executive Officer and Chief 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 Chief Executive Officers and Chief 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, 2016, the end of the period covered by this report. As discussed below, we excluded Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika), and Gasoductos de Chihuahua S. de R.L. de C.V. (GdC) from our evaluation of Sempra Energy's disclosure controls and procedures, to the extent subsumed by Ventika's and GdC's internal control over financial reporting. Based on these evaluations, the Chief Executive Officers and Chief 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 Rules 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, 2016. Deloitte & Touche LLP audited the effectiveness of each company's internal control over financial reporting as of December 31, 2016, as stated in their reports, which are included in this Annual Report.

Other than the changes which may be associated with the acquisitions described below (which did not impact SDG&E or SoCalGas), 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.

As we discuss in Note 3 of the Notes to Consolidated Financial Statements, we acquired Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika) in December 2016 and the remaining 50-percent interest in Gasoductos de Chihuahua S. de R.L. de C.V. (GdC), in September 2016. The carrying value of Ventika's net assets was \$314 million or 2.1 percent of Sempra Energy's net assets at December 31, 2016. Ventika's earnings from the date of acquisition through December 31, 2016 were \$3 million or 0.2 percent of total Sempra Energy earnings for the year ended December 31, 2016. The carrying value of GdC's net assets was \$2.4 billion or 15.6 percent of Sempra Energy's net assets at December 31, 2016. GdC's earnings from the date of acquisition through December 31, 2016 were \$33 million or 2.4 percent of total Sempra Energy earnings for the year ended December 31, 2016. We are in the process of integrating Ventika and GdC. Our management is analyzing, evaluating and, where necessary, will implement changes in, Ventika's and GdC's controls and procedures. Due to the limited period of time since the acquisition dates, we have not had sufficient time to assess the internal controls of Ventika and GdC for the year ended December 31, 2016. Therefore, we excluded Ventika and GdC from our evaluation of internal control over financial reporting contained in this annual report and from our evaluation of disclosure controls and procedures above, to the extent subsumed by Ventika's and GdC's internal control over financial reporting. We intend to include Ventika and GdC in the overall assessment of, and report on, internal control over financial reporting as soon as practicable, but in no event later than one year from the respective acquisition dates.

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

SEMPRA ENERGY

To the Board of Directors and Shareholders of Sempra Energy:

We have audited the internal control over financial reporting of Sempra Energy and subsidiaries (the “Company”) as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. As described in Management’s Report on Internal Control over Financial Reporting, management excluded from its assessment the internal control over financial reporting at Gasoductos de Chihuahua S. de R.L. de C.V. (GdC), and Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika), which were acquired in September 2016, and December 2016, respectively. The carrying value of GdC’s net assets was \$2.4 billion or 15.6 percent of Sempra Energy’s net assets at December 31, 2016. GdC’s earnings from the date of acquisition through December 31, 2016 were \$33 million or 2.4 percent of total Sempra Energy earnings for the year ended December 31, 2016. The carrying value of Ventika’s net assets was \$314 million or 2.1 percent of Sempra Energy’s net assets at December 31, 2016. Ventika’s earnings from the date of acquisition through December 31, 2016 were \$3 million or 0.2 percent of total Sempra Energy earnings for the year ended December 31, 2016. Accordingly, our audit did not include the internal control over financial reporting at GdC and Ventika. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2016 of the Company and our report dated February 28, 2017 expressed an unqualified opinion on those financial statements.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

To the Board of Directors and Shareholders of Sempra Energy:

We have audited the accompanying consolidated balance sheets of Sempra Energy and subsidiaries (the “Company”) as of December 31, 2016 and 2015, and 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, 2016. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Sempra Energy and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, 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), the Company’s internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 28, 2017 expressed an unqualified opinion on the Company’s internal control over financial reporting.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

SAN DIEGO GAS & ELECTRIC COMPANY

To the Board of Directors and Shareholder of San Diego Gas & Electric Company:

We have audited the internal control over financial reporting of San Diego Gas & Electric Company (the “Company”) as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2016 of the Company and our report dated February 28, 2017 expressed an unqualified opinion on those financial statements.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

To the Board of Directors and Shareholder of San Diego Gas & Electric Company:

We have audited the accompanying consolidated balance sheets of San Diego Gas & Electric Company (the “Company”) as of December 31, 2016 and 2015, and 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, 2016. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of San Diego Gas & Electric Company as of December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, 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), the Company’s internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 28, 2017 expressed an unqualified opinion on the Company’s internal control over financial reporting.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

SOUTHERN CALIFORNIA GAS COMPANY

To the Board of Directors and Shareholders of Southern California Gas Company:

We have audited the internal control over financial reporting of Southern California Gas Company (the “Company”) as of December 31, 2016, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the financial statements as of and for the year ended December 31, 2016 of the Company and our report dated February 28, 2017 expressed an unqualified opinion on those financial statements.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

***To the Board of Directors and Shareholders of
Southern California Gas Company:***

We have audited the accompanying balance sheets of Southern California Gas Company (the “Company”) as of December 31, 2016 and 2015, and 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, 2016. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements present fairly, in all material respects, the financial position of Southern California Gas Company as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, 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), the Company’s internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 28, 2017 expressed an unqualified opinion on the Company’s internal control over financial reporting.

Deloitte & Touche LLP

San Diego, California
February 28, 2017

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF OPERATIONS

(Dollars in millions, except per share amounts)

	Years ended December 31,		
	2016	2015	2014
REVENUES			
Utilities	\$ 9,261	\$ 9,254	\$ 9,758
Energy-related businesses	922	977	1,277
Total revenues	10,183	10,231	11,035
EXPENSES AND OTHER INCOME			
Utilities:			
Cost of electric fuel and purchased power	(2,188)	(2,136)	(2,281)
Cost of natural gas	(1,067)	(1,134)	(1,758)
Energy-related businesses:			
Cost of natural gas, electric fuel and purchased power	(277)	(335)	(552)
Other cost of sales	(322)	(148)	(163)
Operation and maintenance	(2,970)	(2,886)	(2,935)
Depreciation and amortization	(1,312)	(1,250)	(1,156)
Franchise fees and other taxes	(426)	(423)	(408)
Impairment losses	(153)	(9)	—
Plant closure adjustment (loss)	—	26	(6)
Gain on sale of assets	134	70	62
Equity earnings, before income tax	6	104	81
Remeasurement of equity method investment	617	—	—
Other income, net	132	126	137
Interest income	26	29	22
Interest expense	(553)	(561)	(554)
Income before income taxes and equity earnings of certain unconsolidated subsidiaries	1,830	1,704	1,524
Income tax expense	(389)	(341)	(300)
Equity earnings, net of income tax	78	85	38
Net income	1,519	1,448	1,262
Earnings attributable to noncontrolling interests	(148)	(98)	(100)
Preferred dividends of subsidiary	(1)	(1)	(1)
Earnings	\$ 1,370	\$ 1,349	\$ 1,161
Basic earnings per common share	\$ 5.48	\$ 5.43	\$ 4.72
Weighted-average number of shares outstanding, basic (thousands)	250,217	248,249	245,891
Diluted earnings per common share	\$ 5.46	\$ 5.37	\$ 4.63
Weighted-average number of shares outstanding, diluted (thousands)	251,155	250,923	250,655

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014				
	Sempra Energy shareholders' equity			Noncontrolling interests (after-tax)	Total
	Pretax amount	Income tax (expense) benefit	Net-of-tax amount		
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
2015:					
Net income	\$1,691	\$(341)	\$1,350	\$ 98	\$1,448
Other comprehensive income (loss):					
Foreign currency translation adjustments	(260)	—	(260)	(30)	(290)
Financial instruments	(80)	33	(47)	5	(42)
Pension and other postretirement benefits	(3)	1	(2)	—	(2)
Total other comprehensive loss	(343)	34	(309)	(25)	(334)
Comprehensive income	1,348	(307)	1,041	73	1,114
Preferred dividends of subsidiary	(1)	—	(1)	—	(1)
Comprehensive income, after preferred dividends of subsidiary	\$1,347	\$(307)	\$1,040	\$ 73	\$1,113
2014:					
Net income	\$1,462	\$(300)	\$1,162	\$100	\$1,262
Other comprehensive income (loss):					
Foreign currency translation adjustments	(193)	—	(193)	(20)	(213)
Financial instruments	(106)	42	(64)	(1)	(65)
Pension and other postretirement benefits	(20)	8	(12)	—	(12)
Total other comprehensive loss	(319)	50	(269)	(21)	(290)
Comprehensive income	1,143	(250)	893	79	972
Preferred dividends of subsidiary	(1)	—	(1)	—	(1)
Comprehensive income, after preferred dividends of subsidiary	\$1,142	\$(250)	\$ 892	\$ 79	\$ 971

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 349	\$ 403
Restricted cash	66	27
Accounts receivable – trade, net	1,390	1,283
Accounts receivable – other, net	164	190
Due from unconsolidated affiliates	26	6
Income taxes receivable	43	30
Inventories	258	298
Regulatory balancing accounts – undercollected	259	307
Fixed-price contracts and other derivatives	83	80
Assets held for sale	201	—
Other	271	267
Total current assets	3,110	2,891
Other assets:		
Restricted cash	10	20
Due from unconsolidated affiliates	201	186
Regulatory assets	3,414	3,273
Nuclear decommissioning trusts	1,026	1,063
Investments	2,097	2,905
Goodwill	2,364	819
Other intangible assets	548	404
Dedicated assets in support of certain benefit plans	430	464
Insurance receivable for Aliso Canyon costs	606	325
Deferred income taxes	234	120
Sundry	815	641
Total other assets	11,745	10,220
Property, plant and equipment:		
Property, plant and equipment	43,624	38,200
Less accumulated depreciation and amortization	(10,693)	(10,161)
Property, plant and equipment, net (\$354 and \$383 at December 31, 2016 and 2015, respectively, related to VIE)	32,931	28,039
Total assets	\$ 47,786	\$ 41,150

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2016	December 31, 2015
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt	\$ 1,779	\$ 622
Accounts payable – trade	1,346	1,133
Accounts payable – other	130	142
Due to unconsolidated affiliates	11	14
Dividends and interest payable	319	303
Accrued compensation and benefits	409	423
Regulatory balancing accounts – overcollected	122	34
Current portion of long-term debt	913	907
Fixed-price contracts and other derivatives	83	56
Customer deposits	158	153
Reserve for Aliso Canyon costs	53	274
Liabilities held for sale	47	—
Other	557	551
Total current liabilities	5,927	4,612
Long-term debt (\$293 and \$303 at December 31, 2016 and 2015, respectively, related to VIE)	14,429	13,134
Deferred credits and other liabilities:		
Customer advances for construction	152	149
Pension and other postretirement benefit plan obligations, net of plan assets	1,208	1,152
Deferred income taxes	3,745	3,157
Deferred investment tax credits	28	32
Regulatory liabilities arising from removal obligations	2,697	2,793
Asset retirement obligations	2,431	2,126
Fixed-price contracts and other derivatives	405	240
Deferred credits and other	1,523	1,176
Total deferred credits and other liabilities	12,189	10,825
Commitments and contingencies (Note 15)		
Equity:		
Preferred stock (50 million shares authorized; none issued)	—	—
Common stock (750 million shares authorized; 250 million and 248 million shares outstanding at December 31, 2016 and 2015, respectively; no par value)	2,982	2,621
Retained earnings	10,717	9,994
Accumulated other comprehensive income (loss)	(748)	(806)
Total Sempra Energy shareholders' equity	12,951	11,809
Preferred stock of subsidiary	20	20
Other noncontrolling interests	2,270	750
Total equity	15,241	12,579
Total liabilities and equity	\$47,786	\$41,150

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 1,519	\$ 1,448	\$ 1,262
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,312	1,250	1,156
Deferred income taxes and investment tax credits	217	239	146
Impairment losses	153	9	—
Plant closure (adjustment) loss	—	(26)	6
Gain on sale of assets	(134)	(70)	(62)
Equity earnings	(84)	(189)	(119)
Remeasurement of equity method investment	(617)	—	—
Fixed-price contracts and other derivatives	21	(10)	(25)
Other	63	66	108
Net change in other working capital components	(59)	699	(375)
Insurance receivable for Aliso Canyon costs	(281)	(325)	—
Changes in other assets	56	(162)	19
Changes in other liabilities	153	(24)	45
Net cash provided by operating activities	2,319	2,905	2,161
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(4,214)	(3,156)	(3,123)
Expenditures for investments and acquisition of businesses, net of cash and cash equivalents acquired	(1,582)	(200)	(240)
Proceeds from sale of assets, net of cash sold	763	373	149
Distributions from investments	25	15	13
Purchases of nuclear decommissioning and other trust assets	(1,034)	(531)	(613)
Proceeds from sales by nuclear decommissioning and other trusts	1,134	577	601
Increases in restricted cash	(139)	(100)	(152)
Decreases in restricted cash	175	93	155
Advances to unconsolidated affiliates	(25)	(31)	(185)
Repayments of advances to unconsolidated affiliates	11	74	18
Other	—	1	35
Net cash used in investing activities	(4,886)	(2,885)	(3,342)
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	(686)	(628)	(598)
Preferred dividends paid by subsidiary	(1)	(1)	(1)
Issuances of common stock	51	52	56
Repurchases of common stock	(56)	(74)	(38)
Issuances of debt (maturities greater than 90 days)	2,951	2,992	3,272
Payments on debt (maturities greater than 90 days)	(2,057)	(1,854)	(2,034)
Increase (decrease) in short-term debt, net	692	(622)	412
Proceeds from sale of noncontrolling interests, net of \$40 in offering costs	1,692	—	—
Purchase of noncontrolling interests	—	—	(74)
Net distributions to noncontrolling interests	(63)	(73)	(104)
Tax benefit related to share-based compensation	—	52	—
Other	(10)	(17)	(37)
Net cash provided by (used in) financing activities	2,513	(173)	854
Effect of exchange rate changes on cash and cash equivalents	—	(14)	(7)
Decrease in cash and cash equivalents	(54)	(167)	(334)
Cash and cash equivalents, January 1	403	570	904
Cash and cash equivalents, December 31	\$ 349	\$ 403	\$ 570

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CHANGES IN OTHER WORKING CAPITAL COMPONENTS			
(Excluding cash and cash equivalents, and debt due within one year)			
Accounts receivable	\$ (42)	\$ (99)	\$ 44
Income taxes receivable, net	3	39	62
Inventories	(20)	65	(133)
Regulatory balancing accounts	198	586	(317)
Regulatory assets and liabilities	(3)	(4)	8
Other current assets	(41)	(18)	(10)
Accounts payable	122	(157)	109
Reserve for Aliso Canyon costs	(221)	274	—
Other current liabilities	(55)	13	(138)
Net change in other working capital components	\$ (59)	\$ 699	\$ (375)
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$ 532	\$ 537	\$ 536
Income tax payments, net of refunds	160	67	102
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES			
Acquisition of businesses:			
Assets acquired, net of cash and cash equivalents	\$ 3,876	\$ 10	\$ —
Fair value of equity method investment immediately prior to acquisition	(1,144)	—	—
Liabilities assumed	(1,322)	(2)	—
Accrued purchase price	—	(5)	—
Cash paid, net of cash and cash equivalents acquired	\$ 1,410	\$ 3	\$ —
Accrued capital expenditures	\$ 626	\$ 566	\$ 433
Increase in capital lease obligations for investment in property, plant and equipment	—	24	60
Financing of build-to-suit property	—	61	61
Redemption of industrial development bonds	—	79	—
Common dividends issued in stock	53	55	42
Dividends declared but not paid	196	180	166

See Notes to Consolidated Financial Statements.

SEMPRA ENERGY
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014					
	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	Sempra Energy shareholders' equity	Non-controlling interests	Total equity
Balance at December 31, 2013	\$2,409	\$ 8,827	\$(228)	\$11,008	\$ 842	\$11,850
Net income		1,162		1,162	100	1,262
Other comprehensive loss			(269)	(269)	(21)	(290)
Share-based compensation expense	48			48		48
Common stock dividends declared		(649)		(649)		(649)
Preferred dividends of subsidiary		(1)		(1)		(1)
Issuances of common stock	97			97		97
Repurchases of common stock	(38)			(38)		(38)
Distributions to noncontrolling interests					(107)	(107)
Equity contributed by noncontrolling interests					1	1
Purchase of noncontrolling interests in subsidiary	(32)			(32)	(41)	(73)
Balance at December 31, 2014	2,484	9,339	(497)	11,326	774	12,100
Net income		1,350		1,350	98	1,448
Other comprehensive loss			(309)	(309)	(25)	(334)
Share-based compensation expense	52			52		52
Common stock dividends declared		(694)		(694)		(694)
Preferred dividends of subsidiary		(1)		(1)		(1)
Issuances of common stock	107			107		107
Repurchases of common stock	(74)			(74)		(74)
Tax benefit related to share-based compensation	52			52		52
Distributions to noncontrolling interests					(80)	(80)
Equity contributed by noncontrolling interests					3	3
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
Common stock dividends declared		(754)		(754)		(754)
Preferred dividends of subsidiary		(1)		(1)		(1)
Issuances of common stock	104			104		104
Repurchases of common stock	(56)			(56)		(56)
Sale of noncontrolling interests, net of offering costs	261		20	281	1,420	1,701
Distributions to noncontrolling interests					(65)	(65)
Equity contributed by noncontrolling interests					3	3
Balance at December 31, 2016	\$2,982	\$10,717	\$(748)	\$12,951	\$2,290	\$15,241

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,		
	2016	2015	2014
Operating revenues			
Electric	\$3,754	\$3,719	\$3,785
Natural gas	499	500	544
Total operating revenues	4,253	4,219	4,329
Operating expenses			
Cost of electric fuel and purchased power	1,187	1,151	1,309
Cost of natural gas	127	153	208
Operation and maintenance	1,048	1,017	1,076
Depreciation and amortization	646	604	530
Franchise fees and other taxes	255	262	241
Plant closure (adjustment) loss	—	(26)	6
Total operating expenses	3,263	3,161	3,370
Operating income	990	1,058	959
Other income, net	50	36	40
Interest expense	(195)	(204)	(202)
Income before income taxes	845	890	797
Income tax expense	(280)	(284)	(270)
Net income	565	606	527
Losses (earnings) attributable to noncontrolling interest	5	(19)	(20)
Earnings attributable to common shares	\$ 570	\$ 587	\$ 507

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014				
	SDG&E shareholder's equity				
	Pretax amount	Income tax (expense) benefit	Net-of-tax amount	Noncontrolling interest (after-tax)	Total
2016:					
Net income	\$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
2015:					
Net income	\$871	\$(284)	\$587	\$19	\$606
Other comprehensive income (loss):					
Financial instruments	—	—	—	6	6
Pension and other postretirement benefits	7	(3)	4	—	4
Total other comprehensive income	7	(3)	4	6	10
Comprehensive income	\$878	\$(287)	\$591	\$25	\$616
2014:					
Net income	\$777	\$(270)	\$507	\$20	\$527
Other comprehensive income (loss):					
Financial instruments	—	—	—	2	2
Pension and other postretirement benefits	(5)	2	(3)	—	(3)
Total other comprehensive (loss) income	(5)	2	(3)	2	(1)
Comprehensive income	\$772	\$(268)	\$504	\$22	\$526

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 8	\$ 20
Restricted cash	11	23
Accounts receivable – trade, net	354	331
Accounts receivable – other, net	17	17
Due from unconsolidated affiliates	4	1
Income taxes receivable	122	1
Inventories	80	75
Prepaid expenses	59	49
Regulatory balancing accounts – net undercollected	259	307
Regulatory assets	81	107
Fixed-price contracts and other derivatives	58	53
Other	19	20
Total current assets	1,072	1,004
Other assets:		
Restricted cash	1	—
Deferred taxes recoverable in rates	1,014	914
Other regulatory assets	998	977
Nuclear decommissioning trusts	1,026	1,063
Sundry	358	301
Total other assets	3,397	3,255
Property, plant and equipment:		
Property, plant and equipment	17,844	16,458
Less accumulated depreciation and amortization	(4,594)	(4,202)
Property, plant and equipment, net (\$354 and \$383 at December 31, 2016 and 2015, respectively, related to VIE)	13,250	12,256
Total assets	\$17,719	\$16,515

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2016	December 31, 2015
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term debt	\$ —	\$ 168
Accounts payable	460	377
Due to unconsolidated affiliates	15	55
Interest payable	40	39
Accrued compensation and benefits	121	129
Accrued franchise fees	43	66
Current portion of long-term debt	191	50
Asset retirement obligations	79	99
Fixed-price contracts and other derivatives	61	51
Customer deposits	76	72
Other	82	101
Total current liabilities	1,168	1,207
Long-term debt (\$293 and \$303 at December 31, 2016 and 2015, respectively, related to VIE)	4,658	4,455
Deferred credits and other liabilities:		
Customer advances for construction	52	46
Pension and other postretirement benefit plan obligations, net of plan assets	232	212
Deferred income taxes	2,829	2,472
Deferred investment tax credits	16	19
Regulatory liabilities arising from removal obligations	1,725	1,629
Asset retirement obligations	751	729
Fixed-price contracts and other derivatives	189	106
Deferred credits and other	421	364
Total deferred credits and other liabilities	6,215	5,577
Commitments and contingencies (Note 15)		
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	4,311	3,893
Accumulated other comprehensive income (loss)	(8)	(8)
Total SDG&E shareholder's equity	5,641	5,223
Noncontrolling interest	37	53
Total equity	5,678	5,276
Total liabilities and equity	\$17,719	\$16,515

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 565	\$ 606	\$ 527
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	646	604	530
Deferred income taxes and investment tax credits	258	195	223
Plant closure (adjustment) loss	—	(26)	6
Fixed-price contracts and other derivatives	(3)	(4)	(6)
Other	(35)	(16)	(23)
Changes in other assets	(16)	(122)	191
Changes in other liabilities	11	13	18
Changes in working capital components:			
Accounts receivable	(31)	(10)	(47)
Due to/from affiliates, net	(19)	21	(10)
Inventories	(5)	(2)	4
Other current assets	25	(24)	(16)
Income taxes	(115)	—	35
Accounts payable	39	(28)	(23)
Regulatory balancing accounts	35	474	(208)
Other current liabilities	(28)	(17)	(104)
Net cash provided by operating activities	1,327	1,664	1,097
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(1,399)	(1,133)	(1,100)
Purchases of nuclear decommissioning trust assets	(1,034)	(526)	(609)
Proceeds from sales by nuclear decommissioning trusts	1,134	577	601
Increases in restricted cash	(49)	(39)	(84)
Decreases in restricted cash	60	35	96
Increase in loans to affiliate, net	(31)	—	—
Expenditures related to long-term service agreement	—	—	(30)
Net cash used in investing activities	(1,319)	(1,086)	(1,126)
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	(175)	(300)	(200)
Issuances of debt (maturities greater than 90 days)	498	444	100
Payments on debt (maturities greater than 90 days)	(204)	(547)	(24)
(Decrease) increase in short-term debt, net	(114)	(131)	187
Capital distributions made by VIE, net	(21)	(30)	(53)
Debt issuance costs	(4)	(2)	—
Net cash (used in) provided by financing activities	(20)	(566)	10
(Decrease) increase in cash and cash equivalents	(12)	12	(19)
Cash and cash equivalents, January 1	20	8	27
Cash and cash equivalents, December 31	\$ 8	\$ 20	\$ 8

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$187	\$199	\$196
Income tax payments (refunds), net	137	88	(4)
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING AND FINANCING ACTIVITIES			
Accrued capital expenditures	\$227	\$191	\$217
Increase in capital lease obligations for investment in property, plant and equipment	—	15	60

See Notes to Consolidated Financial Statements.

SAN DIEGO GAS & ELECTRIC COMPANY
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014					
	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	SDG&E shareholder's equity	Noncontrolling interest	Total equity
Balance at December 31, 2013	\$1,338	\$3,299	\$ (9)	\$4,628	\$ 91	\$4,719
Net income		507		507	20	527
Other comprehensive (loss) income			(3)	(3)	2	(1)
Common stock dividends declared		(200)		(200)		(200)
Distributions to noncontrolling interest					(53)	(53)
Balance at December 31, 2014	1,338	3,606	(12)	4,932	60	4,992
Net income		587		587	19	606
Other comprehensive income			4	4	6	10
Common stock dividends declared		(300)		(300)		(300)
Distributions to noncontrolling interest					(32)	(32)
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		(175)		(175)		(175)
Distributions to noncontrolling interest					(23)	(23)
Equity contributed by noncontrolling interest					2	2
Balance at December 31, 2016	\$1,338	\$4,311	\$ (8)	\$5,641	\$ 37	\$5,678

See Notes to Consolidated Financial Statements.

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SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF OPERATIONS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Operating revenues	\$3,471	\$3,489	\$3,855
Operating expenses			
Cost of natural gas	891	921	1,449
Operation and maintenance	1,385	1,361	1,321
Depreciation and amortization	476	461	431
Franchise fees and other taxes	140	129	133
Impairment losses	22	9	—
Total operating expenses	2,914	2,881	3,334
Operating income	557	608	521
Other income, net	32	30	20
Interest income	1	4	—
Interest expense	(97)	(84)	(69)
Income before income taxes	493	558	472
Income tax expense	(143)	(138)	(139)
Net income	350	420	333
Preferred dividend requirements	(1)	(1)	(1)
Earnings attributable to common shares	\$ 349	\$ 419	\$ 332

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014		
	Pretax amount	Income tax (expense) benefit	Net-of-tax amount
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
2015:			
Net income	\$558	\$(138)	\$420
Other comprehensive income (loss):			
Financial instruments	1	(1)	—
Pension and other postretirement benefits	(2)	1	(1)
Total other comprehensive loss	(1)	—	(1)
Comprehensive income	\$557	\$(138)	\$419
2014:			
Net income/Comprehensive income	\$472	\$(139)	\$333

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
BALANCE SHEETS

(Dollars in millions)

	December 31, 2016	December 31, 2015
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 12	\$ 58
Accounts receivable – trade, net	608	635
Accounts receivable – other, net	77	99
Due from unconsolidated affiliates	8	48
Income taxes receivable	2	—
Inventories	58	79
Regulatory assets	8	7
Other	63	40
Total current assets	836	966
Other assets:		
Regulatory assets arising from pension obligations	742	699
Other regulatory assets	589	636
Insurance receivable for Aliso Canyon costs	606	325
Sundry	399	207
Total other assets	2,336	1,867
Property, plant and equipment:		
Property, plant and equipment	15,344	14,171
Less accumulated depreciation and amortization	(5,092)	(4,900)
Property, plant and equipment, net	10,252	9,271
Total assets	\$13,424	\$12,104

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
BALANCE SHEETS (CONTINUED)

(Dollars in millions)

	December 31, 2016	December 31, 2015
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	\$ 62	\$ —
Accounts payable – trade	481	422
Accounts payable – other	74	76
Due to unconsolidated affiliates	28	—
Income taxes payable	—	3
Accrued compensation and benefits	150	160
Regulatory balancing accounts – net overcollected	122	34
Current portion of long-term debt	—	9
Customer deposits	76	76
Reserve for Aliso Canyon costs	53	274
Other	195	184
Total current liabilities	1,241	1,238
Long-term debt	2,982	2,481
Deferred credits and other liabilities:		
Customer advances for construction	99	103
Pension obligation, net of plan assets	762	716
Deferred income taxes	1,709	1,532
Deferred investment tax credits	12	14
Regulatory liabilities arising from removal obligations	972	1,145
Asset retirement obligations	1,616	1,354
Deferred credits and other	521	372
Total deferred credits and other liabilities	5,691	5,236
Commitments and contingencies (Note 15)		
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	2,644	2,280
Accumulated other comprehensive income (loss)	(22)	(19)
Total shareholders' equity	3,510	3,149
Total liabilities and shareholders' equity	\$13,424	\$12,104

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 350	\$ 420	\$ 333
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	476	461	431
Deferred income taxes and investment tax credits	103	127	130
Impairment losses	22	9	—
Other	(26)	(20)	(7)
Insurance receivable for Aliso Canyon costs	(281)	(325)	—
Changes in other assets	35	(91)	(131)
Changes in other liabilities	7	(7)	29
Changes in working capital components:			
Accounts receivable	37	(90)	30
Inventories	4	102	(113)
Other current assets	(13)	8	(3)
Accounts payable	36	(143)	156
Income taxes	(2)	8	17
Due to/from affiliates, net	6	(11)	(1)
Regulatory balancing accounts	163	112	(109)
Reserve for Aliso Canyon costs	(221)	274	—
Other current liabilities	(25)	46	3
Net cash provided by operating activities	671	880	765
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(1,319)	(1,352)	(1,104)
Decrease (increase) in loans to affiliate, net	50	(50)	—
Net cash used in investing activities	(1,269)	(1,402)	(1,104)
CASH FLOWS FROM FINANCING ACTIVITIES			
Common dividends paid	—	(50)	(100)
Preferred dividends paid	(1)	(1)	(1)
Issuances of long-term debt	499	599	747
Payments on long-term debt	(3)	—	(250)
Increase (decrease) in short-term debt, net	62	(50)	8
Debt issuance costs	(5)	(3)	(7)
Net cash provided by financing activities	552	495	397
(Decrease) increase in cash and cash equivalents	(46)	(27)	58
Cash and cash equivalents, January 1	58	85	27
Cash and cash equivalents, December 31	\$ 12	\$ 58	\$ 85
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Interest payments, net of amounts capitalized	\$ 92	\$ 79	\$ 62
Income tax payments (refunds), net	41	1	(10)
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING ACTIVITY			
Accrued capital expenditures	\$ 207	\$ 189	\$ 168

See Notes to Financial Statements.

SOUTHERN CALIFORNIA GAS COMPANY
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(Dollars in millions)

	Years ended December 31, 2016, 2015 and 2014				
	Preferred stock	Common stock	Retained earnings	Accumulated other comprehensive income (loss)	Total shareholders' equity
Balance at December 31, 2013	\$22	\$866	\$1,679	\$(18)	\$2,549
Net income			333		333
Preferred stock dividends declared			(1)		(1)
Common stock dividends declared			(100)		(100)
Balance at December 31, 2014	22	866	1,911	(18)	2,781
Net income			420		420
Other comprehensive loss				(1)	(1)
Preferred stock dividends declared			(1)		(1)
Common stock dividends declared			(50)		(50)
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)		(1)
Balance at December 31, 2016	\$22	\$866	\$2,644	\$(22)	\$3,510

See Notes to Financial Statements.

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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 variable interest entities (VIEs). Sempra Energy's principal operating units are

- Sempra Utilities, which includes our San Diego Gas & Electric Company (SDG&E), Southern California Gas Company (SoCalGas) and Sempra South American Utilities reportable segments; and
- Sempra Infrastructure, which includes our Sempra Mexico, Sempra Renewables and Sempra LNG & Midstream reportable segments.

Prior to December 31, 2016, our reportable segments were grouped under the following operating units:

- California Utilities (which included the SDG&E and SoCalGas segments)
- Sempra International (which included the Sempra South American Utilities and Sempra Mexico segments)
- Sempra U.S. Gas & Power (which included the Sempra Renewables and Sempra Natural Gas segments)

The grouping of our segments within our operating units as of December 31, 2016 reflects a realignment of management oversight of our operations. As part of this realignment, we changed the name of our "Sempra Natural Gas" segment to "Sempra LNG & Midstream." This name change and the realignment of our segments within our new operating units had no impact on our historical financial position, results of operations, cash flows or segment results previously reported.

We provide descriptions of each of our segments in Note 16.

We refer to SDG&E and SoCalGas collectively as the California Utilities, which do not include our South American utilities or the utilities in our Sempra Infrastructure operating unit. Sempra Global is the holding company for most of our subsidiaries that are not subject to California utility regulation. All references in these Notes to "Sempra Utilities," "Sempra Infrastructure" and their respective 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, Infraestructura Energética Nova, S.A.B. de C.V. (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 (La Bolsa Mexicana de Valores, S.A.B. de C.V., or BMV) where the shares are traded under the symbol IENOVA.

Sempra Energy uses the equity method to account for investments in affiliated companies over which we have the ability to exercise significant influence, but not control. We discuss our investments in unconsolidated entities in Notes 3, 4 and 10.

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 Corporation, which is a wholly owned subsidiary of Sempra Energy.

SoCalGas

SoCalGas' common stock is wholly owned by Pacific Enterprises, which is a wholly owned subsidiary of Sempra Energy.

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.

Regulated Operations

The California Utilities and Sempra Mexico's natural gas distribution utility, Ecogas México, S. de R.L. de C.V. (Ecogas), prepare their financial statements in accordance

with the provisions of accounting principles generally accepted in the United States of America (U.S. GAAP) governing rate-regulated operations, as we discuss below in “Effects of Regulation.”

Sempra South American Utilities has controlling interests in two electric distribution utilities in South America, Chilquinta Energía S.A. (Chilquinta Energía) in Chile and Luz del Sur S.A.A. (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 Comisión Reguladora de Energía (or CRE, the Energy Regulatory Commission) 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 allowance for funds used during construction (AFUDC) related to equity. We discuss AFUDC below in “Property, Plant and Equipment.”

Sempra LNG & Midstream owned Mobile Gas Service Corporation (Mobile Gas) in southwest Alabama and Willmut Gas Company (Willmut Gas) in Mississippi until they were sold in September 2016, as we discuss in Note 3. Mobile Gas and Willmut Gas also prepared their financial statements in accordance with the provisions of U.S. GAAP governing rate-regulated operations. We discuss revenue recognition at our utilities in “Revenues” below.

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, 2016 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 accounting policies of the California Utilities conform with U.S. GAAP for rate-regulated enterprises and reflect the policies of the California Public Utilities Commission (CPUC) and the Federal Energy Regulatory Commission (FERC).

The California Utilities prepare their financial statements in accordance with U.S. GAAP provisions governing rate-regulated operations. 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 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;
- proposed regulatory decisions;
- final 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.

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 Notes 13 and 14.

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 – Quoted prices are 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, U.S. government treasury securities, primarily in the nuclear decommissioning 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
- 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 domestic corporate bonds, municipal bonds and other foreign bonds, primarily in the Nuclear Decommissioning Trusts and in our pension and postretirement benefit plans, 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 congestion revenue rights (CRRs) and fixed-price electricity positions at SDG&E.

CASH AND CASH EQUIVALENTS

Cash equivalents are highly liquid investments with maturities of three months or less at the date of purchase.

RESTRICTED CASH

Restricted cash at Sempra Energy, including amounts at SDG&E discussed below, was \$76 million and \$47 million at December 31, 2016 and 2015, respectively. Of this, \$66 million and \$27 million was classified as current and \$10 million and \$20 million was classified as noncurrent at December 31, 2016 and 2015, respectively.

SDG&E had \$12 million and \$23 million of restricted cash at December 31, 2016 and 2015, respectively, which represents funds held by a trustee for a VIE (see “Variable Interest Entities – SDG&E – Otay Mesa VIE” below) to pay certain operating costs. In 2016, \$11 million of restricted cash was classified as current and \$1 million as noncurrent. In 2015, all restricted cash was classified as current.

Sempra Mexico had restricted cash of \$52 million classified as current at December 31, 2016 and \$9 million and \$20 million classified as noncurrent at December 31, 2016 and 2015, respectively, primarily denominated in Mexican Pesos. These balances represent 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.

Sempra Renewables had restricted cash of \$3 million and \$4 million classified as current at December 31, 2016 and 2015, respectively, primarily representing funds held in accordance with debt agreements at our wholly owned solar project.

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,		
	2016	2015	2014
Sempra Energy Consolidated:			
Allowances for collection of receivables at January 1	\$ 32	\$ 34	\$ 29
Provisions for uncollectible accounts	23	20	25
Write-offs of uncollectible accounts	(20)	(22)	(20)
Allowances for collection of receivables at December 31	\$ 35	\$ 32	\$ 34
SDG&E:			
Allowances for collection of receivables at January 1	\$ 9	\$ 7	\$ 5
Provisions for uncollectible accounts	6	7	7
Write-offs of uncollectible accounts	(7)	(5)	(5)
Allowances for collection of receivables at December 31	\$ 8	\$ 9	\$ 7
SoCalGas:			
Allowances for collection of receivables at January 1	\$ 17	\$ 17	\$ 12
Provisions for uncollectible accounts	14	11	15
Write-offs of uncollectible accounts	(10)	(11)	(10)
Allowances for collection of receivables at December 31	\$ 21	\$ 17	\$ 17

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 the allowance for doubtful accounts 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 last-in first-out (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. At December 31, 2016, SoCalGas recognized a permanent LIFO liquidation of \$33 million. 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 liquefied natural gas (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	
	2016	2015	2016	2015	2016	2015	2016	2015
SDG&E	\$ 2	\$ 6	\$ —	\$ —	\$ 78	\$ 69	\$ 80	\$ 75
SoCalGas ⁽¹⁾	11	49	—	—	47	30	58	79
Sempra South American Utilities	—	—	—	—	27	30	27	30
Sempra Mexico	—	—	6	3	1	10	7	13
Sempra Renewables	—	—	—	—	4	3	4	3
Sempra LNG & Midstream	79	94	3	3	—	1	82	98
Sempra Energy Consolidated	\$92	\$149	\$ 9	\$ 6	\$157	\$143	\$258	\$298

⁽¹⁾ At December 31, 2016 and 2015, SoCalGas' natural gas inventory for core customers is net of an inventory loss related to the Aliso Canyon natural gas leak, which we discuss in Note 15.

INCOME TAXES

Income tax expense includes current and deferred income taxes from operations during the year. We record deferred income taxes for temporary differences between the book and the tax basis of assets and liabilities. Investment tax credits 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 investment tax credit earned. At Sempra Renewables, production tax credits are recognized in income tax expense as earned.

Under the regulatory accounting treatment required for flow-through temporary differences, as discussed in Note 6, the California Utilities and Sempra Mexico recognize

- regulatory assets to offset deferred tax liabilities if it is probable that the amounts will be recovered from customers; and
- regulatory liabilities to offset deferred tax assets if it is probable that the amounts will be returned to customers.

We currently do not record deferred income taxes for basis differences between financial statement and income tax investment amounts in non-U.S. subsidiaries and non-U.S. joint ventures because the related cumulative undistributed earnings are indefinitely reinvested.

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 effective tax rate.

We provide additional information about income taxes in Note 6.

GREENHOUSE GAS (GHG) ALLOWANCES

The California Utilities, Sempra Mexico and Sempra LNG & Midstream are required by California Assembly Bill 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 at no cost on behalf of our customers. We record purchased and allocated GHG allowances at the lower of weighted average cost or market, and include them in Other Current Assets and in Sundry on the Consolidated Balance Sheets based on the dates on which they are required to be surrendered. 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 on the Consolidated Balance Sheets. Sempra Mexico and Sempra LNG & Midstream record the cost of GHG obligations in cost of sales. We include the obligation in Other Current Liabilities and Deferred Credits and Other on the Consolidated Balance Sheets based on the dates on which the allowances will be surrendered. We remove the assets and liabilities from the balance sheets as the allowances are surrendered.

GHG allowances and obligations on our Consolidated Balance Sheets are as follows:

GHG ALLOWANCES AND OBLIGATIONS AT DECEMBER 31

(Dollars in millions)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	2016	2015	2016	2015	2016	2015
Assets:						
Current	\$ 40	\$ 42	\$ 16	\$ 17	\$ 24	\$ 19
Noncurrent	295	201	182	141	109	43
Total assets	\$335	\$243	\$198	\$158	\$133	\$62
Liabilities:						
Current	\$ 40	\$ 41	\$ 16	\$ 17	\$ 24	\$ 18
Noncurrent	171	91	72	34	96	41
Total liabilities	\$211	\$132	\$ 88	\$ 51	\$120	\$59

RENEWABLE ENERGY CERTIFICATES (RECs)

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 power purchase agreements, internal generation or separate purchases in the market to comply with renewable portfolio standards established by the governmental agencies. RECs provide documentation for the generation of a unit of renewable energy that is used to verify compliance with renewable portfolio standards. The cost of RECs at SDG&E is recorded in Cost of Electric Fuel and Purchased Power, which is recoverable in rates, on the Consolidated Statements of Operations.

PROPERTY, PLANT AND EQUIPMENT (PP&E)

PP&E primarily represents the buildings, equipment and other facilities used by the Sempra Utilities to provide natural gas and electric utility services, and by Sempra

Infrastructure in their operations, including construction work in progress at these operating units. 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 15.

Our plant costs include

- labor
- materials and contract services
- expenditures for replacement parts incurred during a major maintenance outage of a generating plant

In addition, the cost of utility plant at our rate-regulated businesses and non-utility regulated projects that meet the regulatory accounting requirements of U.S. GAAP at Sempra Mexico and Sempra LNG & Midstream includes AFUDC. We discuss AFUDC below. The cost of non-utility plant 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 collateralized assets as security for loans in Note 5.

PROPERTY, PLANT AND EQUIPMENT BY MAJOR FUNCTIONAL CATEGORY
(Dollars in millions)

	Property, plant and equipment at December 31,		Depreciation rates for years ended December 31,		
	2016	2015	2016	2015	2014
SDG&E:					
Natural gas operations	\$ 1,897	\$ 1,642	2.40%	2.52%	2.72%
Electric distribution	6,497	6,151	3.86	3.79	3.79
Electric transmission ⁽¹⁾	5,152	4,870	2.66	2.62	2.59
Electric generation ⁽²⁾	1,932	1,891	4.00	3.89	3.86
Other electric ⁽³⁾	1,059	981	5.66	5.73	7.09
Construction work in progress ⁽¹⁾	1,307	923	NA	NA	NA
Total SDG&E	17,844	16,458			
SoCalGas:					
Natural gas operations ⁽⁴⁾	14,428	13,241	3.64	3.83	3.89
Other non-utility	34	110	6.55	3.95	2.88
Construction work in progress	882	820	NA	NA	NA
Total SoCalGas	15,344	14,171			
Other operating units and parent⁽⁵⁾:					
Land and land rights	381	289	20 to 55 years ⁽⁷⁾	33	
Machinery and equipment:					
Utility electric distribution operations	1,519	1,362	12 to 60 years	52	
Generating plants	1,874	782	3 to 100 years	32	
LNG terminals	1,129	1,124	5 to 43 years	43	
Pipelines and storage	3,242	2,311	3 to 55 years	43	
Other	235	233	1 to 50 years	12	
Construction work in progress	1,488	1,022	NA	NA	
Other ⁽⁶⁾	568	448	1 to 80 years	32	
	10,436	7,571			
Total Sempra Energy Consolidated	\$43,624	\$38,200			

⁽¹⁾ At December 31, 2016, includes \$388 million in electric transmission assets and \$46 million in construction work in progress related to SDG&E's 91-percent interest in the Southwest Powerlink (SWPL) 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.

⁽²⁾ Includes capital lease assets of \$258 million at both December 31, 2016 and 2015, primarily related to variable interest entities of which SDG&E is not the primary beneficiary.

⁽³⁾ Includes capital lease assets of \$21 million and \$20 million at December 31, 2016 and 2015, respectively.

⁽⁴⁾ Includes capital lease assets of \$32 million and \$30 million at December 31, 2016 and 2015, respectively.

⁽⁵⁾ Includes \$128 million and \$142 million at December 31, 2016 and 2015, respectively, of utility plant, primarily pipelines and other distribution assets, at Ecogas. Includes \$204 million and \$28 million at December 31, 2015 of utility plant, primarily pipelines and other distribution assets, at Mobile Gas and Willmut Gas, respectively.

⁽⁶⁾ Includes capital lease assets of \$136 million at both December 31, 2016 and 2015, related to a build-to-suit lease.

⁽⁷⁾ Estimated useful lives are for land rights.

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 on our Consolidated Statements of Operations is as follows:

DEPRECIATION EXPENSE			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated	\$1,236	\$1,178	\$1,126
SDG&E	583	544	512
SoCalGas	474	459	429

Accumulated depreciation on our Consolidated Balance Sheets is as follows:

ACCUMULATED DEPRECIATION			
<i>(Dollars in millions)</i>			
	December 31,		
	2016	2015	
SDG&E:			
Accumulated depreciation:			
Electric ⁽¹⁾	\$ 3,873	\$ 3,512	
Natural gas	721	690	
Total SDG&E	4,594	4,202	
SoCalGas:			
Accumulated depreciation of natural gas utility plant in service ⁽²⁾	5,079	4,810	
Accumulated depreciation – other non-utility	13	90	
Total SoCalGas	5,092	4,900	
Other operating units and parent and other:			
Accumulated depreciation – other ⁽³⁾	755	860	
Accumulated depreciation of utility electric distribution operations	252	199	
	1,007	1,059	
Total Sempra Energy Consolidated	\$10,693	\$10,161	

⁽¹⁾ Includes accumulated depreciation for assets under capital lease of \$39 million and \$34 million at December 31, 2016 and 2015, respectively. Includes \$229 million at December 31, 2016 related to SDG&E's 91-percent interest in the SWPL transmission line, jointly owned by SDG&E and other utilities.

⁽²⁾ Includes accumulated depreciation for assets under capital lease of \$31 million and \$29 million at December 31, 2016 and 2015, respectively.

⁽³⁾ Includes \$33 million and \$36 million at December 31, 2016 and 2015, respectively, of accumulated depreciation for utility plant at Ecogas. Includes \$35 million and \$3 million at December 31, 2015 of accumulated depreciation for utility plant at Mobile Gas and Willmut Gas, respectively.

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 and Sempra LNG & Midstream that are both subject to certain regulation and meet U.S. GAAP regulatory accounting requirements record the impact of AFUDC related to equity.

Sempra South American Utilities, Sempra Mexico, Sempra Renewables and Sempra LNG & Midstream capitalize interest costs incurred to finance capital projects and interest on equity method investments that have not commenced planned principal operations. The California Utilities also capitalize certain interest costs.

Interest capitalized and AFUDC are as follows:

CAPITALIZED FINANCING COSTS			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated	\$236	\$201	\$167
SDG&E	62	51	52
SoCalGas	55	49	34

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
- 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	Sempra LNG & Midstream	Total
Balance at December 31, 2014	\$ 834	\$ 25	\$ 72	\$ 931
Foreign currency translation ⁽¹⁾	(112)	—	—	(112)
Balance at December 31, 2015	722	25	72	819
Acquisition of businesses	—	1,590	—	1,590
Sale of business	—	—	(72)	(72)
Foreign currency translation ⁽¹⁾	27	—	—	27
Balance at December 31, 2016	\$ 749	\$1,615	\$ —	\$2,364

⁽¹⁾ We record the offset of this fluctuation to Other Comprehensive Income (Loss).

In 2016, Sempra Mexico recorded goodwill of \$1,590 million in connection with the acquisitions of Gasoductos de Chihuahua S. de R.L. de C.V. (GdC) and Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika) wind power generation facilities. Sempra LNG & Midstream reduced goodwill by \$72 million in connection with the sale of EnergySouth Inc. (EnergySouth). We discuss these acquisitions and the divestiture in Note 3.

Other Intangible Assets

Other Intangible Assets included on the Sempra Energy Consolidated Balance Sheets are as follows:

OTHER INTANGIBLE ASSETS			
<i>(Dollars in millions)</i>			
	Amortization period (years)	December 31,	
		2016	2015
Development rights	50	\$322	\$322
Renewable energy transmission and consumption permit	20	154	—
Storage rights	46	138	138
Other	10 years to indefinite	18	17
		632	477
Less accumulated amortization:			
Development rights		(53)	(47)
Storage rights		(25)	(22)
Other		(6)	(4)
		(84)	(73)
		\$548	\$404

Other Intangible Assets primarily represent storage and development rights related to the natural gas storage facilities of Bay Gas Storage Company, Ltd. (Bay Gas) and Mississippi Hub, LLC (Mississippi Hub), which are being amortized over their estimated useful lives as shown in the table above.

In December 2016, Sempra Mexico recorded an intangible asset of \$154 million, representing 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, which we discuss in Note 3.

Amortization expense for intangible assets was \$11 million in 2016 and \$10 million in each of 2015 and 2014. We estimate the amortization expense for the next five years to be \$18 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 subsidiaries. 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
- 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 (VIE)

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 right to receive benefits that could be significant to the VIE.

SDG&E

SDG&E's power procurement is subject to reliability requirements that may require SDG&E to enter into various power purchase arrangements which 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 upon 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 an agreement to purchase power generated at the Otay Mesa Energy Center (OMEC), a 605-megawatt (MW) generating facility. In addition to tolling, the agreement provides SDG&E with the option to purchase OMEC at the end of the contract term in 2019, or upon earlier termination of the purchased-power agreement, at a predetermined price subject to adjustments based on performance of the facility. If SDG&E does not exercise its option, under certain circumstances, it may be required to purchase the power plant for \$280 million, which we refer to as the put option.

The facility owner, Otay Mesa Energy Center LLC (OMEC LLC), is a VIE (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 \$37 million at December 31, 2016 and \$53 million at December 31, 2015 is included on the Consolidated Balance Sheets in Other Noncontrolling Interests for Sempra Energy and in Noncontrolling Interest for SDG&E.

OMEC LLC has a loan outstanding of \$305 million at December 31, 2016, the proceeds of which were used for the construction of OMEC. The loan is with third party lenders and is collateralized by OMEC's PP&E. SDG&E is not a party to the loan agreement and does not have any additional implicit or explicit financial responsibility to OMEC LLC. The loan fully matures in April 2019 and bears interest at rates varying with market rates. In addition, OMEC LLC has

entered into interest rate swap agreements to moderate its exposure to interest rate changes. We provide additional information concerning the interest rate swaps in Note 9.

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,	
	2016	2015
Cash and cash equivalents	\$ 6	\$ 5
Restricted cash	11	23
Inventories	3	3
Other	2	—
Total current assets	22	31
Restricted cash	1	—
Property, plant and equipment, net	354	383
Total assets	\$377	\$414
Current portion of long-term debt	\$ 10	\$ 10
Fixed-price contracts and other derivatives	13	14
Other	5	5
Total current liabilities	28	29
Long-term debt	293	303
Fixed-price contracts and other derivatives	12	23
Deferred credits and other	7	6
Other noncontrolling interest	37	53
Total liabilities and equity	\$377	\$414

	Years ended December 31,		
	2016	2015	2014
Operating expenses			
Cost of electric fuel and purchased power	\$(79)	\$(83)	\$(83)
Operation and maintenance	29	19	19
Depreciation and amortization	35	26	27
Total operating expenses	(15)	(38)	(37)
Operating income	15	38	37
Interest expense	(20)	(19)	(17)
(Loss) income before income taxes/Net (loss) income	(5)	19	20
Losses (earnings) attributable to noncontrolling interest	5	(19)	(20)
Earnings attributable to common shares	\$ —	\$ —	\$ —

SDG&E has determined that no contracts, other than the one relating to Otay Mesa VIE mentioned above, result in SDG&E being the primary beneficiary of a variable interest entity at December 31, 2016. In addition to the tolling

agreements described above, other variable interests involve various elements of fuel and power costs, and other components of cash flow 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. 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 are not expected to significantly affect the financial position, results of operations, or liquidity of SDG&E. 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. We provide additional information about power purchase agreements with peaker plant facilities that are VIEs of which SDG&E is not the primary beneficiary in Note 15.

Sempra Renewables

Effective December 2016, certain of Sempra Renewables' wind and 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 to direct activities that most significantly impact the economic performance of these VIEs as the operator of the renewable energy projects.

The Consolidated Financial Statements of Sempra Energy include the following amounts associated with these entities. The captions in the tables below correspond to Sempra Energy's Consolidated Balance Sheet.

AMOUNTS ASSOCIATED WITH TAX EQUITY ARRANGEMENTS
(Dollars in millions)

	December 31, 2016
Cash and cash equivalents	\$ 88
Accounts receivable	3
Total current assets	91
Property, plant and equipment, net	926
Total assets	1,017
Accounts payable	68
Other	7
Total current liabilities	75
Asset retirement obligations	27
Total liabilities	102
Other noncontrolling interests	468
Net assets less other noncontrolling interests	\$ 447

As the primary beneficiary of these tax equity limited liability companies, we consolidate them; however, their results of operations for the year ended December 31, 2016 were not material to the Consolidated Statement of Operations of Sempra Energy.

Sempra LNG & Midstream

Sempra Energy's equity method investment in Cameron LNG Holdings, LLC (Cameron LNG JV) is considered to be a VIE principally due to contractual provisions that transfer certain risks to customers. Sempra Energy is not the primary beneficiary because we do not have the power to direct the most significant activities of Cameron LNG JV. We will continue to evaluate Cameron LNG JV for any changes that may impact our determination of the primary beneficiary. The carrying value of our investment in Cameron LNG JV, including amounts recognized in Accumulated Other Comprehensive Income (Loss) (AOCI) related to interest-rate cash flow hedges at Cameron LNG JV, was \$997 million at December 31, 2016 and \$983 million at December 31, 2015, as we discuss in Note 4. Our maximum exposure to loss includes the carrying value of our investment and the guarantees discussed in Note 4.

Other Variable Interest Entities

Sempra Energy's other operating units also enter into arrangements which could include variable interests. We evaluate these arrangements and applicable entities based upon the qualitative and quantitative analyses described above. Certain of these entities are service companies that are VIEs. As the primary beneficiary of these service companies, we consolidate them; however, their financial statements are not material to the financial statements of Sempra Energy. In all other cases, we have determined that these contracts are not variable interests in a VIE and therefore are not subject to the U.S. GAAP requirements concerning the consolidation of VIEs.

ASSET RETIREMENT OBLIGATIONS

For tangible long-lived assets, we record asset retirement obligations 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 of the asset's acquisition), and accreting the obligation until the liability is settled. 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 asset retirement obligations related to various assets, including:

SDG&E and SoCalGas

- fuel and storage tanks
- natural gas transmission systems
- natural gas distribution systems
- hazardous waste storage facilities
- asbestos-containing construction materials

SDG&E

- decommissioning of nuclear power facilities
- electric distribution and transmission systems
- site restoration of a former power plant
- power generation plant (natural gas)

SoCalGas

- underground natural gas storage facilities and wells

Sempra South American Utilities

- electric distribution and transmission systems

Sempra Mexico

- power generation plant (natural gas) (classified as held for sale at December 31, 2016)
- natural gas distribution and transportation systems
- LNG terminal
- wind farm

Sempra Renewables

- certain power generation plants (solar and wind)

Sempra LNG & Midstream

- natural gas distribution systems (sold in September 2016)
- natural gas transportation systems
- underground natural gas storage facilities

The changes in asset retirement obligations are as follows:

CHANGES IN ASSET RETIREMENT OBLIGATIONS

(Dollars in millions)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	2016	2015	2016	2015	2016	2015
Balance as of January 1 ⁽¹⁾	\$2,255	\$2,190	\$828	\$873	\$1,383	\$1,276
Accretion expense	101	92	38	40	61	49
Liabilities incurred and acquired	35	1	—	—	—	—
Deconsolidation and reclassification ⁽²⁾	(16)	—	—	—	—	—
Payments	(47)	(80)	(46)	(79)	—	—
Revisions ⁽³⁾	225	52	10	(6)	215	58
Balance at December 31⁽¹⁾	\$2,553	\$2,255	\$830	\$828	\$1,659	\$1,383

⁽¹⁾ The current portions of the obligations are included in Other Current Liabilities on the Consolidated Balance Sheets.

⁽²⁾ Deconsolidated \$12 million due to the September 2016 sale of EnergySouth and reclassified \$4 million to Liabilities Held for Sale on the Sempra Energy Consolidated Balance Sheet at December 31, 2016, as we discuss in Note 3.

⁽³⁾ The revisions are primarily related to revised estimates of cash flows and, additionally in 2016, to changes in the cost of removal rates primarily for natural gas assets based on updated cost studies approved in the final decision in the 2016 General Rate Case. We discuss the 2016 General Rate Case in Note 14.

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
- unrealized gains or losses on available-for-sale securities

The Consolidated Statements of Comprehensive Income show the changes in the components of other comprehensive income (loss) (OCI), including the amounts attributable to noncontrolling interests. The following tables present the changes in AOCI by component and amounts reclassified out of AOCI to net income, excluding amounts attributable to noncontrolling interests, for the years ended December 31:

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, 2013	\$(129)	\$ (26)	\$(73)	\$(228)
OCI before reclassifications	(193)	(70)	(26)	(289)
Amounts reclassified from AOCI	—	6	14	20
Net OCI	(193)	(64)	(12)	(269)
Balance as of December 31, 2014	(322)	(90)	(85)	(497)
OCI before reclassifications	(260)	(57)	(10)	(327)
Amounts reclassified from AOCI	—	10	8	18
Net OCI	(260)	(47)	(2)	(309)
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)
SDG&E:				
Balance as of December 31, 2013			\$ (9)	\$ (9)
OCI before reclassifications			(5)	(5)
Amounts reclassified from AOCI			2	2
Net OCI			(3)	(3)
Balance as of December 31, 2014			(12)	(12)
OCI before reclassifications			3	3
Amounts reclassified from AOCI			1	1
Net OCI			4	4
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)
SoCalGas:				
Balance as of December 31, 2013		\$ (14)	\$ (4)	\$ (18)
OCI before reclassifications		—	(3)	(3)
Amounts reclassified from AOCI		—	3	3
Net OCI		—	—	—
Balance as of December 31, 2014		(14)	(4)	(18)
OCI before reclassifications		—	(1)	(1)
Net OCI		—	(1)	(1)
Balance as of December 31, 2015		(14)	(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)	\$ (22)

⁽¹⁾ All amounts are net of income tax, if subject to tax, and exclude noncontrolling interests.

⁽²⁾ Total AOCI includes \$20 million associated with the sale of noncontrolling interests, discussed below in "Sale of Noncontrolling Interests – Sempra Mexico – Follow-On Offerings," which does not impact the Consolidated Statement of Comprehensive Income.

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,			
	2016	2015	2014	
Sempra Energy Consolidated:				
Financial instruments:				
Interest rate and foreign exchange instruments	\$ 17	\$ 18	\$ 21	Interest Expense
Interest rate instruments	—	—	(3)	Gain on Sale of Assets
Interest rate instruments	10	12	10	Equity Earnings, Before Income Tax
Interest rate and foreign exchange instruments	7	—	—	Remeasurement of Equity Method Investment
Interest rate and foreign exchange instruments	5	13	—	Equity Earnings, Net of Income Tax
Commodity contracts not subject to rate recovery	(6)	(14)	(8)	Revenues: Energy-Related Businesses
Total before income tax	33	29	20	
	(6)	(4)	(3)	Income Tax Expense
Net of income tax	27	25	17	
	(15)	(15)	(11)	Earnings Attributable to Noncontrolling Interests
	<u>\$ 12</u>	<u>\$ 10</u>	<u>\$ 6</u>	
Pension and other postretirement benefits:				
Amortization of actuarial loss	\$ 10	\$ 14	\$ 23	See note (1) below
Prior service credit	1	—	—	
Total before income tax	11	14	23	
	(5)	(6)	(9)	Income Tax Expense
Net of income tax	<u>\$ 6</u>	<u>\$ 8</u>	<u>\$ 14</u>	
Total reclassifications for the period, net of tax	<u>\$ 18</u>	<u>\$ 18</u>	<u>\$ 20</u>	
SDG&E:				
Financial instruments:				
Interest rate instruments	\$ 12	\$ 12	\$ 11	Interest Expense
	(12)	(12)	(11)	Earnings Attributable to Noncontrolling Interest
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	
Pension and other postretirement benefits:				
Amortization of actuarial loss	\$ 1	\$ 1	\$ 3	See note (1) below
	—	—	(1)	Income Tax Expense
Net of income tax	<u>\$ 1</u>	<u>\$ 1</u>	<u>\$ 2</u>	
Total reclassifications for the period, net of tax	<u>\$ 1</u>	<u>\$ 1</u>	<u>\$ 2</u>	
SoCalGas:				
Financial instruments:				
Interest rate instruments	\$ 1	\$ 1	\$ 1	Interest Expense
	—	(1)	(1)	Income Tax Expense
Net of income tax	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ —</u>	
Pension and other postretirement benefits:				
Amortization of actuarial loss	\$ —	\$ —	\$ 5	See note (1) below
	—	—	(2)	Income Tax Expense
Net of income tax	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 3</u>	
Total reclassifications for the period, net of tax	<u>\$ 1</u>	<u>\$ —</u>	<u>\$ 3</u>	

⁽¹⁾ Amounts are included in the computation of net periodic benefit cost (see "Net Periodic Benefit Cost" in Note 7).

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 noncontrolling interests. Noncontrolling interests are reported as a separate component of equity on the Consolidated Balance Sheets. Earnings/losses attributable to the noncontrolling interests are separately identified on the Consolidated Statements of Operations, and net income/loss and comprehensive income/loss attributable to noncontrolling interests are separately identified on the Consolidated Statements of Comprehensive Income (Loss) and Consolidated Statements of Changes in Equity.

Sale of Noncontrolling Interests

Sempra Mexico – Follow-On Offerings

On October 13, 2016, IEnova priced a private follow-on offering of its common stock (which trades under the symbol IENOVA on the Mexican Stock Exchange) 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 GdC acquisition, \$100 million in loans from its parent and \$250 million of funding from 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 3.

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 noncontrolling interests 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 United States, 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 United States absent registration or an applicable exemption from the registration requirements of the Securities Act and applicable securities laws.

Sempra Renewables – Tax Equity Arrangements

In December 2016, Sempra Renewables closed a transaction with a financial institution to form a portfolio tax equity limited liability company that includes certain 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 \$472 million, net of offering costs, for the sale of noncontrolling interests relating to these transactions. Sempra Renewables consolidates the entities and reports noncontrolling interests representing the financial institutions' respective membership interests in the tax equity arrangements.

The financial institutions that are noncontrolling, tax equity investors 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 noncontrolling interests each period is a balance sheet approach referred to as the hypothetical liquidation at book value (HLBV) method. Under the HLBV method, the amounts of income and loss attributable to the noncontrolling interests 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.

Purchase of Noncontrolling Interests

In December 2014, we purchased 18,625,594 Luz del Sur shares for \$74 million, increasing Sempra South American Utilities' ownership from 79.8 percent to 83.6 percent.

Other Noncontrolling Interests

At December 31, 2016 and 2015, we reported the following 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

(Dollars in millions)

	Percent ownership held by others		Equity held by noncontrolling interests	
	December 31,		December 31,	
	2016	2015	2016	2015
SDG&E:				
Otay Mesa VIE	100%	100%	\$ 37	\$ 53
Sempra South American Utilities:				
Chilquinta Energía subsidiaries ⁽¹⁾	23.1 - 43.4	23.5 - 43.4	22	21
Luz del Sur	16.4	16.4	173	164
Tecsur	9.8	9.8	4	4
Sempra Mexico:				
IEnova, S.A.B. de C.V.	33.6	18.9	1,524	468
Sempra Renewables:				
Tax equity arrangement – wind ⁽²⁾	NA	—	92	—
Tax equity arrangement – solar ⁽²⁾	NA	—	376	—
Sempra LNG & Midstream:				
Bay Gas Storage Company, Ltd.	9.1	9.1	27	25
Liberty Gas Storage, LLC	23.3	23.2	14	14
Southern Gas Transmission Company	49.0	49.0	1	1
Total Sempra Energy			\$2,270	\$750

⁽¹⁾ Chilquinta Energía has four subsidiaries with noncontrolling interests held by others. Percentage range reflects the highest and lowest ownership percentages among these subsidiaries.

⁽²⁾ Net income or loss attributable to the noncontrolling interests is computed using the HLBV method and is not based on ownership percentages.

REVENUES

California Utilities

Our California Utilities generate revenues primarily from deliveries to their customers of electricity by SDG&E and natural gas by both SoCalGas and SDG&E and from related services. We record these revenues following the accrual method and recognize them upon delivery and performance. As described below, recorded revenues include those authorized by the CPUC to support our operations (“decoupled revenue”), as well as commodity costs that are passed through to core gas customers and electric customers:

Preferred Stock

The preferred stock at SoCalGas is presented at Sempra Energy as a noncontrolling interest at December 31, 2016 and 2015. Sempra Energy records charges against income related to noncontrolling interests for preferred stock dividends declared by SoCalGas. We provide additional information regarding preferred stock in Note 11.

- Decoupled revenue – The regulatory framework permits the California Utilities to recover authorized revenue based on estimated annual demand forecasts approved in regular proceedings before the CPUC. Any difference between actual demand and the annual demand approved in the proceedings is recovered or refunded in authorized revenue in the subsequent year. This design, commonly known as “decoupling,” is intended to minimize any impact on earnings due to variability in volumetric demand for electricity and natural gas.

- Commodity costs – The regulatory framework authorizes the California Utilities to recover the actual cost of natural gas procured and delivered to its core customers in rates substantially as incurred. Actual electricity procurement costs are recovered as power is delivered, or to the extent actual amounts vary from forecasts, generally recovered or refunded within the subsequent year. The California Utilities may also record revenue from CPUC-approved incentive awards, some of which require approval by the CPUC prior to being recognized. SDG&E bids and self-schedules its generation into the California Independent System Operator (ISO) energy market on a day-ahead and real-time basis and self-schedules power to serve the demand of its customers. Generally, SDG&E is a net purchaser of power. The California ISO settles SDG&E costs and revenues on an hourly and real-time net basis.

On a monthly basis, SoCalGas accrues natural gas storage contract revenues, which consist of storage reservation and variable charges based on negotiated agreements with terms of up to 15 years.

Sempra South American Utilities

Our electric distribution utilities in South America, Chilquinta Energía and Luz del Sur, serve primarily regulated customers, and their revenues are based on tariffs that are set by the National Energy Commission (Comisión Nacional de Energía, or CNE) in Chile and the Energy and Mining Investment Supervisory Body (Organismo Supervisor de la Inversión en Energía y Minería, or OSINERGMIN) in Peru.

The tariffs charged are based on an efficient model distribution company defined by Chilean law in the case of Chilquinta Energía, and OSINERGMIN in the case of Luz del Sur. The tariffs include operation and maintenance costs, an internal rate of return on the new replacement value of depreciable assets, charges for the use of transmission systems, and a component for the value added by the distributor. Tariffs are designed to provide for a pass-through to customers of the main noncontrollable cost items (mainly power purchases and transmission 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.

Sempra Infrastructure

Our natural gas utilities outside of California apply U.S. GAAP for revenue recognition consistent with the California Utilities, namely Ecogas, our natural gas utility in Mexico, and Mobile Gas and Willmut Gas, our natural gas utilities in Alabama and Mississippi, respectively, that were sold in September 2016.

The table below shows the total utilities revenues in Sempra Energy's Consolidated Statements of Operations for each of the last three years. The revenues include amounts for services rendered but unbilled (approximately one-half month's deliveries) at the end of each year.

TOTAL UTILITIES REVENUES AT SEMPRA ENERGY CONSOLIDATED⁽¹⁾			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Electric revenues	\$5,211	\$5,158	\$5,209
Natural gas revenues	4,050	4,096	4,549
Total	\$9,261	\$9,254	\$9,758

⁽¹⁾ Excludes intercompany revenues.

We provide additional information concerning utility revenue recognition in "Effects of Regulation" above.

Energy-Related Businesses

Sempra South American Utilities

Sempra South American Utilities generates revenues from energy-services companies that provide electric construction services and recognizes these revenues when services are provided in accordance with contractual agreements. The energy-services company in Chile also generates revenue from selling electricity to non-regulated customers.

Sempra Mexico

Sempra Mexico recognizes revenues from:

- pipeline transportation and storage of natural gas, liquid petroleum gas and ethane as capacity is provided;
- sale of natural gas as deliveries are made;
- an LNG regasification terminal that generates revenues from reservation and usage fees under terminal capacity agreements and nitrogen injection service agreements as capacity is provided;
- wind power generation facilities that generate revenues from selling electricity as the power is delivered at the interconnection point; and
- a natural gas-fired power plant that generates revenues from selling electricity and/or capacity to the California ISO and to governmental, public utility and wholesale power marketing entities as the power is delivered at the interconnection point. In February 2016, management approved a plan to market and sell Termoeléctrica de Mexicali (TdM). As a result, we classified it as held for sale. We discuss TdM further in Note 3.

Sempra Mexico reports revenue net of value added taxes in Mexico. Sempra Mexico's revenues also include net realized

gains and losses on settlements of energy derivatives and net unrealized gains and losses from the change in fair values of energy derivatives.

Sempra Renewables

For consolidated entities, Sempra Renewables generates revenues from the sale of solar and wind power pursuant to power purchase agreements, and recognizes these revenues when the power is delivered. It also generates revenues for managing certain of its solar and wind project joint ventures.

Sempra LNG & Midstream

Sempra LNG & Midstream records revenues from contractual counterparty obligations for non-delivery of LNG cargoes, as well as revenues from the sale of LNG and natural gas as deliveries are made to counterparties. Sempra LNG & Midstream also recognizes revenues from natural gas storage and transportation operations when services are provided in accordance with contractual agreements for the storage and transportation services. Sempra LNG & Midstream revenues also include net realized gains and losses on settlements of energy derivatives and net unrealized gains and losses from the change in fair values of energy derivatives. Prior to April 2015, Sempra LNG & Midstream generated revenues from selling electricity and/or capacity from its Mesquite Power facility (see Note 3) to the California ISO and to governmental, public utility and wholesale power marketing entities. Sempra LNG & Midstream recognized these revenues as the electricity was delivered and capacity was provided. Related to its LNG terminal, prior to October 1, 2014, the effective date of Cameron LNG JV, Sempra LNG & Midstream recognized revenues from reservation and usage fees. We discuss the deconsolidation of Cameron LNG, LLC and related assets further in Note 3.

OTHER COST OF SALES

Other Cost of Sales primarily includes

- pipeline capacity costs, and 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 at Sempra Mexico.

OPERATION AND MAINTENANCE EXPENSES

Operation and Maintenance includes operating and maintenance costs, and general and administrative costs, consisting primarily of personnel costs, purchased materials and services, litigation expense and rent.

FOREIGN CURRENCY TRANSLATION

Our operations in South America and 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 (unless the operation is being discontinued), but are reflected in Other Comprehensive Income (Loss) and in Accumulated Other Comprehensive Income (Loss).

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 and Cash Equivalents" on the Sempra Energy Consolidated Statements of Cash Flows.

Currency transaction losses in a currency other than the entity's functional currency were \$1 million, \$7 million and \$15 million for the years ended December 31, 2016, 2015 and 2014, respectively, and are included in Other Income, Net, on the Sempra Energy Consolidated Statements of Operations.

TRANSACTIONS WITH AFFILIATES

Amounts due from and to unconsolidated affiliates at Sempra Energy Consolidated, SDG&E and SoCalGas are as follows:

	December 31,	
	2016	2015
AMOUNTS DUE FROM (TO) UNCONSOLIDATED AFFILIATES		
<i>(Dollars in millions)</i>		
Sempra Energy Consolidated:		
Total due from various unconsolidated affiliates – current	\$ 26	\$ 6
Sempra South American Utilities ⁽¹⁾ :		
Eletrons S.A. and Eletrons II S.A. – 4% Note ⁽²⁾	\$ 96	\$ 72
Other related party receivables	1	—
Sempra Mexico ⁽¹⁾ :		
Affiliate of joint venture with Ductos y Energéticos del Norte:		
Note due November 14, 2018 ⁽³⁾	2	3
Note due November 14, 2018 ⁽³⁾	44	42
Note due November 14, 2018 ⁽³⁾	35	34
Note due November 14, 2018 ⁽³⁾	9	8
Energía Sierra Juárez – Note due June 15, 2018 ⁽⁴⁾	14	24
Sempra LNG & Midstream – Cameron LNG JV	—	3
Total due from unconsolidated affiliates – noncurrent	\$201	\$186
Total due to various unconsolidated affiliates – current	\$ (11)	\$ (14)
SDG&E:		
Sempra Energy ⁽⁵⁾	\$ 3	\$ —
Various affiliates	1	1
Total due from various unconsolidated affiliates – current	\$ 4	\$ 1
Sempra Energy	\$ —	\$ (34)
SoCalGas	(8)	(13)
Various affiliates	(7)	(8)
Total due to unconsolidated affiliates – current	\$ (15)	\$ (55)
Income taxes due from Sempra Energy ⁽⁶⁾	\$159	\$ 28
SoCalGas:		
Sempra Energy ⁽⁷⁾	\$ —	\$ 35
SDG&E	8	13
Total due from unconsolidated affiliates – current	\$ 8	\$ 48
Sempra Energy	\$ (28)	\$ —
Total due to unconsolidated affiliates – current	\$ (28)	\$ —
Income taxes due from Sempra Energy ⁽⁶⁾	\$ 5	\$ 1

- ⁽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 Eletrons S.A. and Eletrons II S.A. (collectively, Eletrons), which is a joint venture of Chilquinta Energía.
- ⁽³⁾ U.S. dollar-denominated loan, at a variable interest rate based on the 30-day LIBOR plus 450 basis points (5.27 percent at December 31, 2016), to finance the Los Ramones Norte pipeline project.
- ⁽⁴⁾ U.S. dollar-denominated loan, at a variable interest rate based on the 30-day LIBOR plus 637.5 basis points (7.15 percent at December 31, 2016), to finance the first phase of the Energía Sierra Juárez wind project, which is a joint venture of IEnova.
- ⁽⁵⁾ At December 31, 2016, net receivable included outstanding advances to Sempra Energy of \$31 million at an interest rate of 0.68%.
- ⁽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.
- ⁽⁷⁾ At December 31, 2015, net receivable included outstanding advances to Sempra Energy of \$50 million at an interest rate of 0.11%.

Revenues and cost of sales from unconsolidated affiliates are as follows:

	Years ended December 31,		
	2016	2015	2014
REVENUES AND COST OF SALES FROM UNCONSOLIDATED AFFILIATES			
<i>(Dollars in millions)</i>			
Revenues:			
Sempra Energy Consolidated	\$25	\$ 26	\$13
SDG&E	7	10	13
SoCalGas	76	75	69
Cost of Sales:			
Sempra Energy Consolidated	\$72	\$107	\$78
SDG&E	64	49	17

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 rate plus a margin of 13 to 20 basis points, 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 operation and maintenance expense.

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 not included 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. Energía Sierra Juárez is a 50-percent owned and unconsolidated joint venture of Sempra Mexico that commenced operations in June 2015.

Sempra Renewables

Sempra Renewables, through its wholly owned subsidiary, Sempra Global Services, Inc. (SGS), provides project administration and operating and maintenance services to certain of its renewable energy unconsolidated joint ventures.

Sempra LNG & Midstream

Sempra LNG & Midstream provides project administration and operating and maintenance services to Cameron LNG JV, as well as providing personnel on an employee leasing basis.

Sempra LNG & Midstream has an agreement with Rockies Express Pipeline LLC (Rockies Express) for capacity on the Rockies Express pipeline (REX). In the second quarter of 2016, Sempra LNG & Midstream permanently released certain pipeline capacity with Rockies Express and others, as we discuss in Note 15.

Guarantees

Sempra Energy has provided guarantees to certain of its solar and wind farm joint ventures and entered into guarantees related to the financing of the Cameron LNG JV project, as we discuss in Note 4.

RESTRICTED NET ASSETS

Sempra Energy Consolidated

As we discuss below, the California Utilities 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 5) and in other

agreements that limit the amount of funds that can be transferred to Sempra Energy. At December 31, 2016, Sempra Energy was in compliance with all covenants related to its debt agreements.

At December 31, 2016, 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 \$8.6 billion. Additionally, the amount of restricted net assets of our unconsolidated entities is \$5.9 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 4, \$44 million of Sempra Energy's consolidated retained earnings balance represents undistributed earnings of equity method investments at December 31, 2016.

Sempra 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, 2016, Sempra Energy could have received combined loans and dividends of approximately \$579 million, funded by long-term debt issuance, from SDG&E and approximately \$340 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, 2016 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 5.

Based on these restrictions, at December 31, 2016, SDG&E's restricted net assets were \$5.1 billion and SoCalGas' restricted net assets were \$3.2 billion, which could not be transferred to Sempra Energy.

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, 2016.

Sempra Infrastructure

Significant restrictions of Sempra Infrastructure subsidiaries include

- Mexico requires domestic corporations to maintain minimum legal reserves as a percentage of capital stock, resulting in restricted net assets of \$152 million at Sempra Energy's consolidated Mexican subsidiaries at December 31, 2016.
- Wholly owned GdC has a long-term debt agreement (see Note 5) that requires it to maintain a reserve account to pay the projects' debt. Under this restriction, net assets totaling \$14 million are restricted at December 31, 2016.
- Wholly owned Ventika has long-term debt agreements (see Note 5) 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 \$38 million are restricted at December 31, 2016.
- Energía Sierra Juárez, a 50-percent owned and unconsolidated joint venture of Sempra Mexico (see Notes 3 and 4), 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 draws, project revenues and other amounts are deposited and applied in accordance with the debt agreements. The long-term debt agreements also limit the joint venture's ability to incur liens, incur additional indebtedness, make acquisitions and undertake certain actions. Under these restrictions, net assets totaling \$10 million are restricted as of December 31, 2016.
- Ductos y Energéticos del Norte, S. de R.L. de C.V. (DEN), a 50-percent owned and unconsolidated joint venture of Sempra Mexico (see Notes 3 and 4), has a 50-percent owned and unconsolidated joint venture with a long-term debt agreement that requires it to maintain a reserve account to pay projects' debt. Under these restrictions, net assets totaling \$130 million are restricted at December 31, 2016.
- Wholly owned solar project has a long-term debt agreement that requires 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 agreement. This long-term debt agreement also limits the solar project's ability to incur liens, incur additional indebtedness, make acquisitions and undertake certain actions, while also requiring maintenance of certain debt ratios. Under these restrictions, net assets totaling \$9 million are restricted at December 31, 2016.
- Tax equity limited liability companies at Sempra Renewables are required to maintain completion reserve depository accounts to be used to pay for trailing construction costs that become due subsequent to the tax equity transaction closing. At December 31, 2016, as a result of these requirements, there were total restricted net assets at these tax equity limited liability companies of approximately \$78 million.
- 50- and 25-percent owned and unconsolidated joint ventures at Sempra Renewables have debt agreements that require each joint venture to maintain reserve accounts in order to pay the projects' debt service and operation and maintenance requirements. We discuss Sempra Energy guarantees associated with these requirements in Note 4. At December 31, 2016, as a result of these requirements, there were total restricted net assets at these joint ventures of approximately \$265 million.
- 91-percent owned Bay Gas has long-term debt instruments containing restrictions relating to the payment of dividends and other distributions if Bay Gas does not maintain a specified debt service coverage ratio. Bay Gas had no restricted net assets at December 31, 2016.
- 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 joint venture 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 joint venture. We discuss Sempra Energy guarantees associated with Cameron LNG JV's debt agreements in Note 4. Under these restrictions, net assets of Cameron LNG JV of approximately \$5.5 billion are restricted at December 31, 2016.

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,		
	2016	2015	2014
Sempra Energy Consolidated:			
Allowance for equity funds used during construction	\$116	\$107	\$106
Investment gains ⁽¹⁾	23	3	27
Losses on interest rate and foreign exchange instruments, net	(32)	(4)	(15)
Foreign currency transaction losses	(1)	(7)	(15)
Sale of other investments	5	11	2
Electrical infrastructure relocation income ⁽²⁾	10	7	21
Regulatory interest, net ⁽³⁾	4	3	6
Sundry, net	7	6	5
Total	\$132	\$126	\$137
SDG&E:			
Allowance for equity funds used during construction	\$ 46	\$ 37	\$ 37
Regulatory interest, net ⁽³⁾	3	3	6
Sundry, net	1	(4)	(3)
Total	\$ 50	\$ 36	\$ 40
SoCalGas:			
Allowance for equity funds used during construction	\$ 40	\$ 36	\$ 26
Regulatory interest, net ⁽³⁾	1	—	—
Sundry, net	(9)	(6)	(6)
Total	\$ 32	\$ 30	\$ 20

⁽¹⁾ Represents investment 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 Operation and Maintenance on the Consolidated Statements of Operations.

⁽²⁾ Income at Luz del Sur associated with the relocation of electrical infrastructure.

⁽³⁾ Interest on regulatory balancing accounts.

NOTE 2. NEW ACCOUNTING STANDARDS

We describe below recent pronouncements that have had or may have a significant effect on our financial condition, results of operations, cash flows or disclosures.

Accounting Standards Update (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 provides 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.

ASU 2015-14 defers the effective date of ASU 2014-09 by one year for all entities and permits early adoption on a limited basis. For public entities, ASU 2014-09 is effective for fiscal years beginning after December 15, 2017, with early adoption permitted for fiscal years beginning after December 15, 2016, and is effective for interim periods in the year of adoption. We plan to adopt ASU 2014-09 on January 1, 2018 using the modified retrospective transition method and are currently evaluating the effect on our ongoing financial reporting. As part of our evaluation, we formed multiple working groups with oversight from a steering

committee comprised of members from relevant Sempra Energy business units. We separated our various revenue streams into high-level categories, which will serve as the basis for accounting analysis and documentation of the impact of ASU 2014-09 on our revenue recognition. In addition, we continue to actively monitor outstanding issues currently being addressed by the American Institute of Certified Public Accountants' Revenue Recognition Working Group and the Financial Accounting Standards Board's Transition Resource Group, since conclusions reached by these groups may impact our application of these ASU's.

ASU 2015-07, "Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)": ASU 2015-07 removes the requirement to categorize within the fair value hierarchy investments for which fair value is measured at net asset value (NAV), as well as the requirement to make specific disclosures for all investments for which the entity has elected to measure the fair value using the NAV practical expedient. We retrospectively adopted ASU 2015-07 on January 1, 2016, and it did not affect our financial condition, results of operations or cash flows. The required changes to our disclosure are reflected in Note 7.

ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities": 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, 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. Upon adoption, 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. The guidance on equity securities without readily determinable fair values will be applied prospectively to all equity investments that exist as of the date of adoption of the standard.

For public entities, ASU 2016-01 is effective for fiscal years beginning after December 15, 2017. We will adopt ASU 2016-01 on January 1, 2018 as required and do not expect it to materially affect our financial condition, results of operations or cash flows. We will make the required changes to our disclosures upon adoption.

ASU 2016-02, "Leases": ASU 2016-02 requires entities to include substantially all leases on the balance sheet by requiring the recognition of right-of-use assets and lease liabilities for all leases. Entities may elect to exclude from the balance sheet those leases with a maximum possible term of

less than 12 months. For lessees, a lease is classified as finance or operating, and the asset and liability are initially measured at the present value of the lease payments. For lessors, accounting for leases is largely unchanged from previous provisions of U.S. GAAP, other than certain changes to align lessor accounting to specific changes made to lessee accounting and ASU 2014-09. ASU 2016-02 also requires new qualitative and quantitative disclosures for both lessees and lessors.

For public entities, ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, with early adoption permitted, and is effective for interim periods in the year of adoption. The standard requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The modified retrospective approach includes optional practical expedients that may be elected, which would allow entities to continue to account for leases that commence before the effective date of the standard in accordance with previous U.S. GAAP unless the lease is modified, except for the lessee requirement to begin recognizing right-of-use assets and lease liabilities for all operating leases on the balance sheet at the reporting date. We are currently evaluating the effect of the standard on our ongoing financial reporting and have not yet selected the year in which we will adopt the standard. As part of our evaluation, we formed a steering committee comprised of members from relevant Sempra Energy business units. Based on our assessment to date, we have determined that we will adopt ASU 2016-02 using the modified retrospective approach and will elect the practical expedients available under the transition guidance.

ASU 2016-05, "Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships": ASU 2016-05 provides clarification that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not, in and of itself, require dedesignation of that hedging relationship provided that all other hedge accounting criteria continue to be met. ASU 2016-05 may be adopted prospectively or using a modified retrospective approach. We prospectively adopted ASU 2016-05 on January 1, 2016, and it did not affect our financial condition, results of operations or cash flows.

ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting": ASU 2016-09 is intended to simplify several aspects of the accounting for employee share-based payment transactions. Under ASU 2016-09, excess tax benefits and tax deficiencies are required to be recorded in earnings, and the requirement to reclassify excess tax benefits from operating to financing activities on the statement of cash flows has been eliminated. ASU 2016-09 also allows entities to withhold taxes up to the maximum individual statutory tax rate without resulting in liability classification of the award and clarifies that cash payments made to taxing authorities in

connection with withheld shares should be classified as financing activities in the statement of cash flows. Additionally, the standard provides for an accounting policy election to either continue to estimate forfeitures or account for them as they occur. For public entities, ASU 2016-09 is effective for fiscal years beginning after December 15, 2016, with early adoption permitted, and is effective for interim periods in the year of adoption.

We early adopted the provisions of ASU 2016-09 during the three months ended September 30, 2016, with an effective date of January 1, 2016. Upon adoption:

- Sempra Energy, SDG&E and SoCalGas recognized a cumulative-effect adjustment to retained earnings and a deferred tax asset as of January 1, 2016 of \$107 million, \$23 million and \$15 million, respectively, for previously unrecognized excess tax benefits from share-based compensation.
- Sempra Energy, SDG&E and SoCalGas recognized earnings consisting of excess tax benefits on the Consolidated Statements of Operations of \$34 million, \$7 million and \$4 million, respectively, in the year ended December 31, 2016, all of which related to the three months ended March 31, 2016. The \$34 million was previously recorded in Sempra Energy Shareholders' Equity in Common Stock prior to adoption of ASU 2016-09.
- The excess tax benefits from share-based compensation for Sempra Energy were previously classified as a financing activity on Sempra Energy's Consolidated Statement of Cash Flows. As now required, the excess tax benefits for Sempra Energy, SDG&E and SoCalGas are included in Cash Flows From Operating Activities on the Consolidated Statements of Cash Flows for the year ended December 31, 2016. This amendment was adopted prospectively, and therefore, we have not adjusted the Consolidated Statements of Cash Flows for the prior periods presented.
- As a result of the provision to recognize excess tax benefits in earnings, these benefits are no longer included in the calculation of diluted earnings per share (EPS) effective January 1, 2016. The weighted-average number of common shares outstanding for diluted EPS increased by 75 thousand shares for the three months ended March 31, 2016 and 98 thousand shares and 89 thousand shares for the three months and six months ended June 30, 2016, respectively. We discuss the impact further in Note 12.

Upon adoption of ASU 2016-09, we elected to continue estimating the number of awards expected to be forfeited and adjusting our estimate on an ongoing basis. All other provisions of ASU 2016-09 did not impact our financial condition, results of operations or cash flows.

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, with early adoption permitted for fiscal years beginning after December 15, 2018. We are currently evaluating the effect of the standard on our ongoing financial reporting and have not yet selected the year in which we will adopt the standard.

ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments": ASU 2016-15 provides guidance on how certain cash receipts and cash payments are to be presented and classified in the statement of cash flows in order to reduce diversity in practice.

For public entities, ASU 2016-15 is effective for fiscal years beginning after December 15, 2017, with early adoption permitted, and is effective for interim periods in the year of adoption. An entity that elects early adoption must adopt all of the amendments in the same period. Entities must apply the guidance retrospectively to all periods presented, but may apply it prospectively if retrospective application would be impracticable. We are currently evaluating the effect of the standard on our ongoing financial reporting and have not yet selected the year in which we will adopt the standard.

ASU 2016-18, "Restricted Cash": ASU 2016-18 requires amounts described as restricted cash and restricted cash equivalents to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. A reconciliation between the balance sheet and the statement of cash flows must be disclosed when the balance sheet includes more than one line item for cash, cash equivalents, restricted cash and restricted cash equivalents.

For public entities, ASU 2016-18 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years, with early adoption permitted. We are currently evaluating the effect of the standard on our ongoing financial reporting and have not yet selected the year in which we will adopt the standard.

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 should be applied on a prospective basis. We are currently evaluating the effect of the standard on our ongoing financial reporting and have not yet selected the year in which we will adopt the standard.

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. For public entities, ASU 2017-05 is effective for annual reporting periods beginning after December 15, 2017, including interim

periods within that reporting period, with early adoption permitted. An entity may elect to apply the amendments under a retrospective or modified retrospective approach. We are currently evaluating the effect of the standard on our ongoing financial reporting and plan to adopt in conjunction with ASU 2014-09 on January 1, 2018, but have not yet selected the method of adoption.

NOTE 3. 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 Mexico

The following table summarizes the total fair value of the 2016 business combinations at Sempra Mexico described below and the values of the assets acquired and liabilities assumed at the dates of acquisition:

PURCHASE PRICE ALLOCATIONS

(Dollars in millions)

	GdC At September 26, 2016 ⁽¹⁾	Ventika At December 14, 2016
Fair value of business combination:		
Cash consideration (fair value of total consideration)	\$1,144	\$ 310
Fair value of equity interest in GdC immediately prior to acquisition	1,144	—
Total fair value of business combination	<u>\$2,288</u>	<u>\$ 310</u>
Recognized amounts of identifiable assets acquired and liabilities assumed:		
Cash and cash equivalents	\$ 66	\$ —
Restricted cash	—	68
Accounts receivable ⁽²⁾	39	14
Other current assets	6	1
Other intangible assets	—	154
Deferred income taxes	—	23
Regulatory assets	33	—
Property, plant and equipment	1,248	673
Other noncurrent assets	1	3
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 identifiable net assets	<u>827</u>	<u>181</u>
Goodwill	1,461	129
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 GdC's deferred income taxes as of the acquisition date, primarily related to basis differences in GdC's property, plant and equipment. 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⁾ We expect acquired accounts receivable to be substantially realizable in cash. Accounts receivable are net of negligible collection allowances.

At December 31, 2016, the purchase price allocations for the acquisitions were 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 tax assets, liabilities and other attributes. During the measurement periods, which may be up to one year from the respective acquisition dates, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Upon conclusion of the measurement periods or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded through earnings in the periods in which they occur.

Gasoductos de Chihuahua S. de R.L. de C.V.

Background and Financing. In July 2015, IEnova entered into an agreement to purchase Petróleos Mexicanos' (or PEMEX, the Mexican state-owned oil company) 50-percent interest in GdC. GdC develops and operates energy infrastructure in Mexico. On September 21, 2016, IEnova received approval for the acquisition from Mexico's Comisión Federal de Competencia Económica. On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in GdC 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 GdC to 100 percent. GdC became a consolidated subsidiary of IEnova on this date. Prior to the acquisition date, IEnova owned 50 percent of GdC and accounted for its interest as an equity method investment.

The assets involved in the acquisition include three natural gas pipelines, an ethane pipeline, and a liquid petroleum gas pipeline and associated storage terminal. The transaction excludes the Los Ramones Norte pipeline, in which IEnova will continue holding an indirect 25-percent ownership interest through GdC's interest in DEN. As of the acquisition date, IEnova continues to hold a 50-percent interest in DEN through GdC and accounts for it as an equity method investment. PEMEX continues to hold its 50-percent interest in DEN, which enables us to have an ongoing relationship with PEMEX for joint development of new projects in the future.

We 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 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. We expect the GdC acquisition to have strategic benefits, including opportunities for expansion into areas such as the transportation and storage of refined products; and a larger platform and presence in Mexico to participate in energy sector reform, reflecting the value of goodwill recognized. None of the goodwill is expected to be deductible in Mexico or the United States 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 GdC 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 GdC immediately prior to the business acquisition. We discuss non-recurring fair value measures and the associated accounting impact of the GdC acquisition in Note 10.

Valuation of GdC's Assets and Liabilities. Based on the nature of the Mexico regulatory environment and the oversight surrounding the establishment and maintenance of rates that GdC charges for services on its assets, GdC 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 GdC's 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. As a regulated business will generally earn a return of its costs and a reasonable return on its invested capital, but nothing more, the value of a regulated business is the value of its invested capital.

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 has concluded that the carrying value of GdC's 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, our analysis indicates that historical carrying value approximates fair value due to their short-term nature.

Impact on Operating Results. We incurred acquisition costs of \$4 million and \$1 million in the years ended December 31, 2016 and 2015, respectively. These costs are included in Operation and Maintenance Expense on the Sempra Energy Consolidated Statements 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 noncontrolling interest) from GdC 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 power purchase agreements with five private off-takers. The acquisition was funded through \$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. The factors contributing to the recognition of goodwill include the opportunity for us to secure a strategic position in Mexico's emerging renewable energy market and the potential to further expand the existing wind power generation facilities. None of the goodwill is expected to be deductible in Mexico or in the United States for income tax purposes.

Valuation of Ventika's Assets and Liabilities. The fair values of the tangible and intangible assets acquired and

liabilities assumed have been 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 utilizing market based discounted cash flows. We utilized the pricing included in the existing power purchase agreements, 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 20 years, reflecting the life of the transmission and consumption transmission permit.
- Debt – Utilizing an income approach, we valued debt by discounting future debt payments by a market yield commensurate with the remaining term of the loans.
- Derivatives – Utilizing 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 net operating losses, and for 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, our analysis indicates 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 Operation and Maintenance Expense 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 noncontrolling interest) from Ventika since the December 14, 2016 date of acquisition.

Unaudited Pro Forma Information

The following table presents unaudited pro forma information for the years ended December 31, 2016 and 2015, combining the historical results of operations of Sempra Energy, GdC and Ventika as though the acquisitions occurred on January 1, 2015. The pro forma information is not necessarily indicative of results that would have been achieved had the businesses been combined during the periods presented or the results that we will experience going forward.

UNAUDITED PRO FORMA INFORMATION – SEMPR ENERGY CONSOLIDATED

(Dollars in millions)

	Years ended December 31,	
	2016	2015
Revenues	\$10,463	\$10,473
Net income	1,145	1,938
Earnings	1,058	1,641

The unaudited pro forma information above assumes:

- the related IEnova equity offerings, discussed above and in Note 1, occurred on January 1, 2015, which results in a change in Sempra Energy's noncontrolling interest in IEnova from 18.9 percent to 33.6 percent for all periods presented;
- the proceeds from the IEnova equity offerings were used to fund the acquisitions, instead of the bridge loan that was provided by Sempra Global to IEnova for the GdC acquisition, therefore interest expense on the commercial paper borrowings supporting the bridge loan is excluded for all periods presented;
- interest expense on the borrowings against Sempra Mexico's revolving credit facility began when Ventika's commercial operations commenced in April 2016;
- equity earnings, net of income tax, from GdC that were previously included in Sempra Energy's results have been excluded for both periods presented;
- the gain related to the remeasurement of our previously held equity interest in GdC has been included in the year ended December 31, 2015, and accordingly, the year ended December 31, 2016 was adjusted to exclude the gain; and
- acquisition-related transaction costs have been included in the year ended December 31, 2015, and accordingly, the year ended December 31, 2016 was adjusted to exclude them.

Most of Sempra Mexico's operations, including GdC and Ventika, use the U.S. dollar as their functional currency.

Sempra Renewables

In July 2016, Sempra Renewables acquired a 100-percent interest in a 100-MW wind development project currently

under construction in Huron County, Michigan, for a total purchase price of \$22 million. The wind farm has a 15-year power purchase agreement with a load serving entity that will commence upon commercial operation, expected in late 2017.

In March 2015, Sempra Renewables invested \$8 million to acquire a 100-percent interest in a 78-MW wind development project in Stearns County, Minnesota. The wind farm has a 20-year power purchase agreement with a load serving entity and began commercial operation in December 2016.

In May 2014, Sempra Renewables invested \$121 million to become a 50-percent partner with Consolidated Edison Development (Con Edison Development) in four fully operating solar facilities totaling 110 MW in Tulare County and Kings County, California (collectively, the California solar partnership). The renewable power from all of the projects has been sold under long-term contracts with a load serving entity. We account for our investment in the California solar partnership under the equity method.

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 Mexico

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 September 2016, Sempra Mexico obtained market information indicating that the fair value of TdM may be less than its carrying value. 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 Impairment Losses on Sempra Energy's Consolidated Statement of Operations. We discuss non-recurring fair value measures and the associated accounting impact on TdM in Note 10.

In connection with classifying TdM as held for sale, we recognized \$8 million in income tax expense in 2016 for a deferred Mexican income tax liability related to the excess of carrying value over the tax basis. As the Mexican income tax on this basis difference is based on current carrying value,

foreign exchange rates and inflation, such amount could change in future periods until the date of sale. We are actively pursuing the sale of TdM, which we expect to be completed in the second half of 2017.

At December 31, 2016, the carrying amounts of the major classes of assets and related liabilities held for sale associated with TdM are as follows:

ASSETS HELD FOR SALE AT DECEMBER 31, 2016	
<i>(Dollars in millions)</i>	
	Termoeléctrica de Mexicali
Inventories	\$ 9
Other current assets	30
Deferred income taxes	21
Property, plant and equipment, net	120
Other noncurrent assets	21
Total assets held for sale	\$201
Accounts payable	\$ 2
Other current liabilities	5
Deferred income taxes	14
Asset retirement obligations	4
Other noncurrent liabilities	22
Total liabilities held for sale	\$ 47

DIVESTITURES

Sempra Mexico

Sale of Equity Interest

In July 2014, Sempra Mexico completed the sale of a 50-percent interest in the 155-MW first phase of its Energía Sierra Juárez wind project to a wholly owned subsidiary of InterGen N.V. for cash proceeds of \$24 million, net of \$2 million cash sold. Sempra Mexico recognized a pretax gain on the sale of \$19 million (\$14 million after-tax). Included in the deconsolidation was net PP&E of \$137 million and long-term debt, including current portion, of \$82 million. The gain on sale included a \$7 million after-tax gain attributable to the remeasurement of the retained investment to fair value. Our remaining 50-percent interest in Energía Sierra Juárez is accounted for under the equity method.

Sempra Renewables

Rosamond Solar

In December 2015, Sempra Renewables sold its 100-percent interest in Rosamond Solar, a development project located in Antelope Valley, California for \$26 million in cash. Upon completion of the sale that was comprised of \$18 million of net PP&E, Sempra Renewables recognized a pretax gain of \$8 million (\$5 million after-tax), which is included in Gain on Sale of Assets on our Consolidated Statement of Operations.

Sale of Equity Interests

In November 2014, Sempra Renewables formed a joint venture with Con Edison Development, by selling a 50-percent interest in the 75-MW Broken Bow 2 Wind project for \$58 million in cash. Included in the deconsolidation was net PP&E of \$151 million and long-term debt, including current portion, of \$72 million. Sempra Renewables recognized a pretax gain on the sale of \$14 million (\$8 million after-tax).

In March 2014, Sempra Renewables formed a joint venture with Con Edison Development, by selling a 50-percent interest in its 250-MW Copper Mountain Solar 3 solar power facility for \$66 million in cash, net of \$2 million cash sold. Included in the deconsolidation was net PP&E of \$247 million and long-term debt, including current portion, of \$97 million. Sempra Renewables recognized a pretax gain on the sale of \$27 million (\$16 million after-tax).

Our remaining 50-percent interests in these investments are accounted for under the equity method. Based on the nature of the underlying assets, these investments are considered in-substance real estate. Therefore, in accordance with applicable U.S. GAAP, for each of these investment transactions, the equity method investments were measured at their historical cost and no portion of the gains was attributable to a remeasurement of the retained investments to fair value. Pretax gains from the sale of our interests in these investments are included in Gain on Sale of Assets on our Consolidated Statement of Operations in 2014.

Sempra LNG & Midstream

EnergySouth Inc.

In September 2016, Sempra LNG & Midstream sold 100 percent of the outstanding equity of EnergySouth Inc. (EnergySouth), the parent company of Mobile Gas and Willmut Gas, to Spire Inc., formerly known as The Laclede Group, Inc. Sempra LNG & Midstream received cash proceeds of \$318 million, net of \$2 million cash sold, with the buyer assuming debt of \$67 million. We recognized a pretax gain on the sale of \$130 million (\$78 million after-tax). As we discuss in Note 15, litigation and any associated liabilities and insurance receivable at Mobile Gas were retained by Mobile Gas at the close of the transaction.

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, Before Income Tax, 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 10.

In the second quarter of 2016, Sempra LNG & Midstream permanently released pipeline capacity that it held with Rockies Express and others, as we discuss in Note 15.

Mesquite Power Plant

In April 2015, Sempra LNG & Midstream sold the remaining 625-MW block of the Mesquite Power plant that was classified as held for sale at December 31, 2014, together with a related power sales contract, for net cash proceeds of \$347 million. We recognized a pretax gain on the sale of \$61 million (\$36 million after-tax), included in Gain on Sale of Assets on our Consolidated Statement of Operations.

Cameron LNG JV

On August 6, 2014, Sempra LNG & Midstream and its project partners, comprised of affiliates of ENGIE S.A., Mitsui & Co., Ltd., and Mitsubishi Corporation (through a related company jointly established with Nippon Yusen Kabushiki Kaisha), provided their respective final investment decision with regard to the investment in the development, construction and operation of the natural gas liquefaction export facility at the terminal in Hackberry, Louisiana, owned by Cameron LNG, LLC. The effective date of Cameron LNG JV among Sempra Energy and its project partners occurred on October 1, 2014.

Our equity in Cameron LNG JV was derived from our contribution of Cameron LNG, LLC to the joint venture at its historical carrying value. Included in the deconsolidation was net PP&E of approximately \$1.0 billion. The other partners were issued equity interests in Cameron LNG JV in an aggregate of 49.8 percent. Cameron LNG, LLC thereby ceased to be wholly owned by Sempra LNG & Midstream, which retained a 50.2-percent interest in Cameron LNG JV. As of the October 1, 2014 effective date, Sempra LNG & Midstream began to account for its investment in Cameron LNG JV under the equity method. Sempra Energy did not recognize a gain or loss related to the contribution of Cameron LNG, LLC. We provide additional information concerning the Cameron LNG JV in Note 4.

The following table summarizes the deconsolidation of the following previously wholly owned subsidiaries:

2016:

- EnergySouth

2014:

- Energía Sierra Juárez
- Broken Bow 2 Wind
- Copper Mountain Solar 3
- Cameron LNG, LLC

DECONSOLIDATION OF SUBSIDIARIES

(Dollars in millions)

	Years ended December 31,	
	2016	2014
Proceeds, net of transaction costs	\$ 304	\$ 152
Cash	(2)	(10)
Restricted cash	—	(5)
Inventory	(3)	—
Other current assets	(14)	(23)
Regulatory assets	(12)	—
Goodwill	(72)	—
Property, plant and equipment, net	(199)	(1,557)
Other noncurrent assets	(53)	(65)
Accounts payable and accrued expenses	12	188
Due to affiliates	—	39
Other current liabilities	13	—
Long-term debt, including current portion	67	251
Deferred income taxes	36	—
Regulatory liabilities	23	—
Asset retirement obligations	12	—
Other noncurrent liabilities	18	12
Accumulated other comprehensive income	—	(7)
Gain on sale of business and equity interests ⁽¹⁾	(130)	(60)
(Increase) in equity method investments upon deconsolidation	\$ —	\$ (1,085)

⁽¹⁾ Included in Gain on Sale of Assets on our Consolidated Statements of Operations.

NOTE 4. 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 Investments on the Consolidated Balance Sheets. We adjust each investment for our share of each investee's earnings or losses, dividends, and other comprehensive income or loss. We evaluate the carrying value of unconsolidated entities for impairment under the U.S. GAAP provisions for equity method investments.

We provide the carrying value of our investments and earnings (losses) on these investments below:

EQUITY METHOD AND OTHER INVESTMENT BALANCES	December 31,	
	2016	2015
<i>(Dollars in millions)</i>		
Sempra South American Utilities:		
Eletrans ⁽¹⁾	\$ (8)	\$ (12)
Sempra Mexico:		
Ductos y Energéticos del Norte	42	—
Energía Sierra Juárez ⁽²⁾	38	30
Gasoductos de Chihuahua ⁽³⁾	—	489
Infraestructura Marina del Golfo	100	—
Sempra Renewables:		
Wind:		
Auwahi Wind	41	44
Broken Bow 2 Wind	35	41
Cedar Creek 2 Wind	75	75
Flat Ridge 2 Wind	271	275
Fowler Ridge 2 Wind	43	46
Mehoopany Wind	92	92
Solar:		
California solar partnership	113	120
Copper Mountain Solar 2	33	32
Copper Mountain Solar 3	42	44
Mesquite Solar 1	86	86
Other	13	—
Sempra LNG & Midstream:		
Cameron LNG JV ⁽⁴⁾	997	983
Rockies Express Pipeline LLC ⁽⁵⁾	—	477
Parent and other:		
RBS Sempra Commodities LLP	67	67
Total equity method investments	2,080	2,889
Other	17	16
Total	\$2,097	\$2,905

⁽¹⁾ Includes losses on forward exchange contracts entered into to manage the foreign currency exchange rate risk of the Chilean Unidad de Fomento (CLF) relative to the U.S. dollar, related to certain construction commitments that are denominated in CLF. The contracts settle based on anticipated payments to vendors, generally monthly, ending in July 2018.

⁽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.

⁽³⁾ The carrying value of our equity method investment was \$65 million higher than the underlying equity in the net assets of the investee due to equity method goodwill at December 31, 2015.

⁽⁴⁾ The carrying value of our equity method investment is \$190 million and \$143 million higher than the underlying equity in the net assets of the investee at December 31, 2016 and 2015, respectively, primarily due to guarantees, which we discuss below, and interest capitalized on the investment, as the joint venture has not commenced its planned principal operations.

⁽⁵⁾ The carrying value of our equity method investment at December 31, 2015 was \$357 million lower than the underlying equity in the net assets of the investee due to an impairment charge recorded in 2012.

EARNINGS (LOSSES) FROM EQUITY METHOD INVESTMENTS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Earnings (losses) recorded before income tax:			
Sempra Renewables:			
Wind:			
Auwahi Wind	\$ 4	\$ 4	\$ 4
Broken Bow 2 Wind	(2)	(2)	—
Cedar Creek 2 Wind	(2)	(6)	(3)
Flat Ridge 2 Wind	(7)	(12)	(7)
Fowler Ridge 2 Wind	4	4	2
Mehoopany Wind	—	(1)	(1)
Solar:			
California solar partnership	7	6	6
Copper Mountain Solar 2	6	7	3
Copper Mountain Solar 3	8	8	2
Mesquite Solar 1	17	16	14
Other	(1)	—	—
Sempra LNG & Midstream:			
Cameron LNG JV	(2)	5	2
Rockies Express Pipeline LLC	(26)	79	60
Parent and other:			
RBS Sempra Commodities LLP	—	(4)	(2)
Other	—	—	1
	\$ 6	\$104	\$81
Earnings (losses) recorded net of income tax⁽¹⁾:			
Sempra South American Utilities:			
Eletrans	\$ 3	\$ (4)	\$ (4)
Sempra Mexico:			
Ductos y Energéticos del Norte	5	—	—
Energía Sierra Juárez	6	6	3
Gasoductos de Chihuahua	64	83	39
	\$ 78	\$ 85	\$38

⁽¹⁾ As the earnings (losses) from these investments are recorded net of income tax, they are presented below the income tax expense line, so as not to impact our effective income tax rate.

Our share of the undistributed earnings of equity method investments was \$44 million and \$299 million at December 31, 2016 and 2015, respectively. The December 31, 2016 and 2015 balances do not include remaining distributions of \$67 million associated with our investment in RBS Sempra Commodities LLP (RBS Sempra Commodities) and expected to be received from the partnership as it is dissolved, as we discuss below.

SEMPRA MEXICO

GdC and DEN

As we discuss in Note 3, on September 26, 2016, IEnova completed the acquisition of the remaining 50-percent interest in GdC and GdC became a consolidated subsidiary. Prior to the acquisition date, IEnova owned 50 percent of GdC and accounted for its interest as an equity method investment. As of the acquisition date, IEnova accounts for GdC's 50-percent interest in DEN as an equity method investment.

Infraestructura Marina del Golfo (IMG)

In June 2016, IMG, a joint venture between IEnova and a subsidiary of TransCanada Corporation, was awarded the right to build, own and operate the Sur de Texas – Tuxpan natural gas marine pipeline by the Federal Electricity Commission (Comisión Federal de Electricidad, or CFE). IEnova has a 40-percent interest in the project and accounts for its interest as an equity method investment, and TransCanada Corporation owns the remaining 60-percent interest. The project is expected to be completed in the second half of 2018 and is fully contracted under a 25-year natural gas transportation service contract with the CFE. During the year ended December 31, 2016, Sempra Mexico invested cash of \$100 million in the IMG joint venture.

Energía Sierra Juárez

In July 2014, Sempra Mexico completed the sale of a 50-percent interest in the 155-MW first phase of its Energía Sierra Juárez wind project to a wholly owned subsidiary of InterGen N.V., as we discuss further in Note 3.

SEMPRA RENEWABLES

Sempra Renewables has 50-percent interests in wind and solar energy generation facilities in operation in the U.S. The generating capacities of the facilities are contracted under long-term power purchase agreements. These facilities are accounted for under the equity method.

SEMPRA LNG & MIDSTREAM

Rockies Express

As we discuss in Note 3, 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 United States. In April 2015, Sempra LNG & Midstream invested \$113 million of cash in Rockies Express to repay project debt that matured in early 2015.

Cameron LNG JV

The Cameron LNG JV is a joint venture partnership that was formed effective October 1, 2014 among Sempra Energy and three project partners, as we discuss in Note 3. The Cameron LNG existing regasification terminal contributed to the joint venture includes two marine berths and three LNG storage tanks, and is capable of processing 1.5 billion cubic feet (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 a nameplate capacity of 13.9 million tonnes per annum (Mtpa) of LNG, with an expected export capability of 12 Mtpa of LNG, or approximately 1.7 Bcf per day. As of October 1, 2014, Sempra LNG & Midstream began accounting for its investment in Cameron LNG JV under the equity method.

During the years ended December 31, 2016 and 2015, Sempra LNG & Midstream capitalized \$47 million and \$49 million, respectively, of interest related to this equity method investment that has not commenced planned principal operations. During the year ended December 31, 2015, Sempra LNG & Midstream invested \$10 million of cash in Cameron LNG JV.

Cameron LNG JV Financing

General. On August 6, 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 will be 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.

On August 6, 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 partners. The occurrence of the effectiveness of the joint venture on October 1, 2014 was a condition precedent to first disbursement of funds under the Loan Facility Agreements. The Sempra Energy guarantee of 50.2 percent of Cameron LNG JV financing also became effective upon effectiveness of the joint venture. 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 on October 1, 2014, with an associated carrying value of \$43 million at December 31, 2016, 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, Before Income Tax.

On August 6, 2014, Sempra Energy and the other project partners 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.

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.

Mandatory Prepayments. Cameron LNG JV must make mandatory prepayments of all loans made under the Loan Facility Agreements under certain circumstances, including: upon receipt of certain insurance proceeds and expropriation compensation; upon receipt of certain performance liquidated damages under Cameron LNG JV's engineering, procurement and construction contract for the liquefaction terminal; in connection with the loss of its tolling agreements or export permits that result in a reduction of Cameron LNG JV's debt service coverage ratios below a specified threshold; if it becomes unlawful in any applicable jurisdiction for a lender to fund or maintain its loans; or in connection with any mandatory prepayment of senior notes outstanding (if any).

The loans under the NEXI Covered Loan Facility Agreement and the loans held by JBIC under the JBIC Loan Facility Agreement are subject to certain additional mandatory prepayments that would be triggered if the Japanese sponsors fail to maintain certain ownership interests in Cameron LNG JV, if Cameron LNG JV's Japanese tolling customers do not hold commitments for a certain quantum of nameplate capacity at the liquefaction terminal or if the aggregate annual contracted LNG commitments by Cameron LNG JV's tolling customers to Japanese LNG buyers fall below a certain minimum threshold under certain circumstances.

Events of Default. Cameron LNG JV's Loan Facility Agreements and related finance documents also 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 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 SEMPRAS COMMODITIES

RBS Sempra Commodities is a United Kingdom limited liability partnership formed by Sempra Energy and The Royal Bank of Scotland plc (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. We account for our investment in RBS Sempra Commodities under the equity method, and report miscellaneous costs since the sale of the business in Parent and Other.

In April 2011, we and RBS entered into a letter agreement (Letter Agreement) which amended certain provisions of the agreements that formed RBS Sempra Commodities. The Letter Agreement addresses the wind-down of the partnership and the distribution of the partnership's remaining assets. The investment balance of \$67 million at December 31, 2016 reflects remaining distributions expected to be received from the partnership in accordance with the Letter Agreement. The timing and amount of distributions, if any, may be impacted by the matters we discuss related to RBS Sempra Commodities in Note 15 in "Legal Proceedings – Other Litigation." In addition, amounts may be retained by the partnership for an extended period of time to help offset unanticipated future general and administrative costs necessary to complete the dissolution of the partnership.

In connection with the Letter Agreement described above, we also released RBS from its indemnification obligations with respect to items for which J.P. Morgan Chase & Co. (JP Morgan), one of the buyers of the partnership's businesses, has agreed to indemnify us.

SUMMARIZED FINANCIAL INFORMATION

We present summarized financial information below, aggregated for all of our equity method investments for the periods in which we were invested in the entity. The amounts below represent the aggregate financial position and results of operations of 100 percent of each of Sempra Energy's equity method investments.

SUMMARIZED FINANCIAL INFORMATION

(Dollars in millions)

	Years ended December 31,		
	2016 ⁽¹⁾	2015	2014
Gross revenues	\$1,079	\$1,533	\$1,296
Operating expense	(726)	(845)	(749)
Income from operations	353	688	547
Interest expense	(127)	(312)	(298)
Net income/Earnings ⁽²⁾	252	440	291

	At December 31,	
	2016 ⁽¹⁾	2015
Current assets	\$ 704	\$ 750
Noncurrent assets	9,970	15,112
Current liabilities	629	859
Noncurrent liabilities	6,627	7,862

⁽¹⁾ On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in GdC, increasing its ownership percentage to 100 percent, and on May 9, 2016, Sempra LNG & Midstream sold its 25-percent interest in Rockies Express. At December 31, 2016, GdC and Rockies Express are no longer equity method investments.

⁽²⁾ 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 our solar and wind joint ventures generally requires the joint venture 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, operation and maintenance, and firm transmission and production tax credits reserve accounts are not maintained at specific thresholds. In some cases, the joint venture 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 solar and wind joint ventures are not guaranteed by the partners, but are secured by project assets.

At December 31, 2016, we provided guarantees aggregating a maximum of \$332 million with an associated aggregated carrying value of \$8 million for guarantees related to project financing. In addition, at December 31, 2016, we provided guarantees to solar and wind farm joint ventures aggregating a maximum of \$164 million with an associated aggregated carrying value of \$2 million, primarily related to purchased-power agreements and engineering, procurement and construction contracts.

NOTE 5. DEBT AND CREDIT FACILITIES

LINES OF CREDIT

At December 31, 2016, Sempra Energy Consolidated had an aggregate of \$4.3 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, 2016 was approximately \$3 billion. Our foreign operations have additional general purpose credit facilities aggregating \$1.7 billion at December 31, 2016. Available unused credit on these lines totaled \$1 billion at December 31, 2016.

PRIMARY U.S. COMMITTED LINES OF CREDIT

(Dollars in millions)

	At December 31, 2016			
	Total facility	Commercial paper outstanding	Letters of credit outstanding	Available unused credit
Sempra Energy ⁽¹⁾	\$1,000	\$ —	\$65	\$ 935
Sempra Global ⁽²⁾	2,335	1,181	—	1,154
California Utilities ⁽³⁾ :				
SDG&E	750	—	—	750
SoCalGas	750	62	—	688
Less: subject to a combined limit of \$1 billion for both utilities	(500)	—	—	(500)
	1,000	62	—	938
Total	\$4,335	\$1,243	\$65	\$3,027

⁽¹⁾ 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.

⁽²⁾ Sempra Energy guarantees Sempra Global's obligations under the credit facility.

⁽³⁾ 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.

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, 2016.

- 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, 2016		
		Total facility	Amount outstanding	Available unused credit
Sempra South American Utilities ⁽¹⁾ :				
Peru ⁽²⁾	Peruvian sol	\$ 392	\$179 ⁽³⁾	\$ 213
Chile	Chilean peso	113	—	113
Sempra Mexico:				
5-year revolver expiring in August 2020 with a syndicate of eight lenders	U.S. dollar	1,170	446	724
Total		\$1,675	\$625	\$1,050

⁽¹⁾ The credit facilities were entered into to finance working capital and for general corporate purposes and expire between 2017 and 2019.

⁽²⁾ The Peruvian facilities require a debt to equity ratio of no more than 170 percent, with which Peru is in compliance at December 31, 2016.

⁽³⁾ Includes bank guarantees of \$18 million.

WEIGHTED AVERAGE INTEREST RATES

The weighted average interest rates on the total short-term debt at Sempra Energy Consolidated were 1.51 percent and 1.09 percent at December 31, 2016 and 2015, respectively.

At December 31, 2016, the weighted average interest rate on total short-term debt at SoCalGas was 0.75 percent. At December 31, 2015, the weighted average interest rate on total short-term debt at SDG&E was 1.01 percent.

LONG-TERM DEBT

The following tables show the detail and maturities of long-term debt outstanding:

LONG-TERM DEBT (Dollars in millions)	December 31,	
	2016	2015
SDG&E		
First mortgage bonds (collateralized by plant assets):		
Bonds at variable rates (1.151% at December 31, 2016) March 9, 2017	\$ 140	\$ 140
1.65% July 1, 2018 ⁽¹⁾	161	161
3% August 15, 2021	350	350
1.914% payable 2015 through February 2022	197	232
3.6% September 1, 2023	450	450
2.5% May 15, 2026	500	—
6% June 1, 2026	250	250
5% payable 2015 through December 2027 ⁽²⁾	—	105
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
	<u>4,349</u>	<u>3,989</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)	305	315
Capital lease obligations:		
Purchased-power agreements	239	243
Other	1	1
	<u>545</u>	<u>559</u>
	4,894	4,548
Current portion of long-term debt	(191)	(50)
Unamortized discount on long-term debt	(11)	(10)
Unamortized debt issuance costs	(34)	(33)
Total SDG&E	<u>4,658</u>	<u>4,455</u>
SoCalGas		
First mortgage bonds (collateralized by plant assets):		
5.45% April 15, 2018	250	250
1.55% June 15, 2018	250	250
3.15% September 15, 2024	500	500
3.2% June 15, 2025	350	350
2.6% June 15, 2026	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
	<u>3,000</u>	<u>2,500</u>
Other long-term debt (uncollateralized):		
1.875% Notes payable 2016 through May 2026 ⁽¹⁾	4	8
5.67% Notes January 18, 2028	5	5
Capital lease obligations	—	1
	<u>9</u>	<u>14</u>
	3,009	2,514
Current portion of long-term debt	—	(9)
Unamortized discount on long-term debt	(7)	(7)
Unamortized debt issuance costs	(20)	(17)
Total SoCalGas	<u>2,982</u>	<u>2,481</u>

LONG-TERM DEBT (CONTINUED)*(Dollars in millions)*

	December 31,	
	2016	2015
Sempra Energy		
Other long-term debt (uncollateralized):		
6.5% Notes June 1, 2016, including \$300 at variable rates after fixed-to-floating rate swaps effective 2011 (4.77% at December 31, 2015)	\$ —	\$ 750
2.3% Notes April 1, 2017	600	600
6.15% Notes June 15, 2018	500	500
9.8% Notes February 15, 2019	500	500
1.625% Notes October 7, 2019	500	—
2.4% Notes March 15, 2020	500	500
2.85% Notes November 15, 2020	400	400
2.875% Notes October 1, 2022	500	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
6% Notes October 15, 2039	750	750
Market value adjustments for interest rate swaps, net	(3)	(2)
Build-to-suit lease ⁽³⁾	137	136
Sempra South American Utilities		
Other long-term debt (uncollateralized):		
Chilquinta Energía – 4.25% Series B Bonds October 30, 2030	185	170
Luz del Sur		
Bank loans 5.05% to 6.7% payable 2016 through December 2018	75	136
Corporate bonds at 4.75% to 8.75% payable 2014 through September 2029	346	292
Other bonds at 3.77% to 4.61% payable 2020 through May 2022	7	8
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)	63	75
6.3% Notes February 2, 2023 (4.12% after cross-currency swap)	189	227
Notes at variable rates (4.63% after floating-to-fixed rate swaps effective 2014), payable 2016 through December 2026, collateralized by plant assets	352	—
Bank loans including \$254 at a weighted-average fixed rate of 6.67%, \$187 at variable rates (weighted-average rate of 6.29% after floating-to-fixed rate swaps effective 2014) and \$40 at variable rates (3.99% at December 31, 2016), payable 2016 through March 2032, collateralized by plant assets	481	—
Sempra Renewables		
Other long-term debt (collateralized by project assets):		
Loan at variable rates (2.625% at December 31, 2016) payable 2012 through December 2028 except for \$64 at 3.668% after floating-to-fixed rate swaps effective June 2012 ⁽¹⁾	84	91
Sempra LNG & Midstream		
First mortgage bonds (Mobile Gas, collateralized by plant assets):		
4.14% September 30, 2021 ⁽²⁾	—	20
5% September 30, 2031 ⁽²⁾	—	42
Other long-term debt (uncollateralized unless otherwise noted):		
Notes at 2.87% to 3.51% October 1, 2026 ⁽¹⁾	20	19
8.45% Notes payable 2012 through December 2017, collateralized by parent guarantee	6	11
3.1% Notes December 30, 2018, collateralized by plant assets ⁽¹⁾⁽²⁾	—	5
	7,548	7,086
Current portion of long-term debt	(722)	(848)
Unamortized discount on long-term debt	(10)	(10)
Unamortized premium on long-term debt	4	5
Unamortized debt issuance costs	(31)	(35)
Total other Sempra Energy	6,789	6,198
Total Sempra Energy Consolidated	\$14,429	\$13,134

⁽¹⁾ Callable long-term debt not subject to make-whole provisions.⁽²⁾ Early redemption or deconsolidated in 2016.⁽³⁾ We discuss this lease in Note 15.

MATURITIES OF LONG-TERM DEBT⁽¹⁾

(Dollars in millions)

	SDG&E	SoCalGas	Other Sempra Energy	Total Sempra Energy Consolidated
2017	\$ 186	\$ —	\$ 719	\$ 905
2018	207	500	707	1,414
2019	321	—	1,096	1,417
2020	36	—	996	1,032
2021	385	—	113	498
Thereafter	3,519	2,509	3,777	9,805
Total	\$4,654	\$3,009	\$7,408	\$15,071

⁽¹⁾ Excludes capital lease obligations, build-to-suit lease, market value adjustments for interest rate swaps, discounts, premiums and debt issuance costs.

Various long-term obligations totaling \$6.5 billion at Sempra Energy at December 31, 2016 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, 2016 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	\$ 412	\$ 4	\$ 104	\$ 520
Subject to make-whole provisions	3,797	3,005	6,042	12,844

In addition, the OMEC LLC project financing loan discussed in Note 1, with \$305 million of outstanding borrowings at December 31, 2016, may be prepaid at the borrowers' option.

FIRST MORTGAGE BONDS

The California Utilities issue first mortgage bonds secured by a lien on utility plant. 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 an additional \$4.5 billion of first mortgage bonds at SDG&E and \$0.7 billion at SoCalGas at December 31, 2016.

In May 2016, SDG&E publicly offered and sold \$500 million of 2.50-percent first mortgage bonds maturing in 2026. SDG&E used the proceeds from the offering to redeem, prior to a scheduled maturity in 2027, \$105 million aggregate principal amount of 5-percent, tax-exempt

industrial development revenue bonds, to repay outstanding commercial paper and for other general corporate purposes.

In June 2016, SoCalGas publicly offered and sold \$500 million of 2.60-percent first mortgage bonds maturing in 2026. SoCalGas used the proceeds from the offering to repay outstanding commercial paper and for other general corporate purposes.

OTHER LONG-TERM DEBT

Sempra Energy

In October 2016, Sempra Energy publicly offered and sold \$500 million of 1.625-percent, fixed-rate notes maturing in 2019. Sempra Energy used the proceeds from this offering to repay outstanding commercial paper.

Sempra South American Utilities

Luz del Sur has outstanding corporate bonds and bank loans that are denominated in the local currency. In July 2016, Luz del Sur publicly offered and sold \$50 million of corporate bonds at 6.50 percent maturing in 2025. In January 2017, Luz del Sur also publicly issued and sold \$50 million of corporate bonds at 6.375 percent, maturing in 2023.

Sempra Mexico

In September 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in GdC, as we discuss in Note 3. Pursuant to the agreement, IEnova assumed \$364 million of long-term debt, including \$49 million classified as current at the acquisition date. Principal and interest payments are due quarterly each year, and the loan fully matures in December 2026. The loan bears interest equal to LIBOR plus a spread of 2 percent to 2.75 percent, which varies over the term of the loan. To moderate exposure to interest rate and associated cash flow variability, GdC entered into floating-to-fixed interest rate swaps of the LIBOR component for the full loan amount, resulting in an all-in fixed rate of 2.63 percent plus the corresponding spread. The loan is collateralized by the TDF S. de R.L. de

The long-term debt bears interest as follows:

INTEREST RATES ON VENTIKA LOANS AT DECEMBER 31, 2016

(Dollars in millions)

	Amount outstanding	Weighted-average		
		Stated rate	Margin ⁽¹⁾	Total rate
Fixed rate loans	\$254	3.64%	3.03%	6.67%
Variable rate loans, hedged	187	3.26% ⁽²⁾	3.03%	6.29%
Variable rate loans, unhedged	40	LIBOR	3.03%	3.99%
Total variable rate loans	227			
Total long-term debt	\$481			6.30%

⁽¹⁾ Margin varies between 3.03 percent to 3.93 percent over the term of the loan.

⁽²⁾ Fixed LIBOR component after floating-to-fixed interest rate swap.

The loans are collateralized by project assets. The loan agreements contain various affirmative, negative and informational covenants. At December 31, 2016, Ventika was in compliance with all the covenants.

Sempra LNG & Midstream

In September 2016, Sempra LNG & Midstream completed the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas. Sempra LNG & Midstream received \$318 million, net of \$2 million cash sold, in cash proceeds,

C.V. liquid petroleum gas pipeline and the San Fernando natural gas pipeline, which are wholly owned by GdC. The loan agreement contains various covenants, including maintaining a certain interest coverage ratio and a minimum members' equity during the term of the loan. At December 31, 2016, GdC was in compliance with these and all other financial covenants.

In December 2016, IEnova completed the acquisition of Ventika, as we discuss in Note 3. Pursuant to the agreement, IEnova assumed \$485 million of long-term debt, including \$7 million classified as current at the acquisition date, of which \$113 million fully matures in March 2024 and \$372 million fully matures in March 2032. Principal and interest payments are due quarterly each year.

and the buyer assumed debt of \$67 million, which included \$20 million of 4.14 percent first mortgage bonds and \$42 million of 5 percent first mortgage bonds at Mobile Gas, and \$5 million of 3.1 percent notes at Willmut Gas. We discuss the sale of EnergySouth in Note 3.

INTEREST RATE SWAPS

We discuss our fair value and cash flow hedging interest rate swaps in Note 9.

NOTE 6. INCOME TAXES

Reconciliation of net U.S. statutory federal income tax rates to the effective income tax rates is as follows:

RECONCILIATION OF FEDERAL INCOME TAX RATES TO EFFECTIVE INCOME TAX RATES

	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated:			
U.S. federal statutory income tax rate	35%	35%	35%
Utility depreciation	4	5	5
U.S. tax on repatriation of foreign earnings	(1)	1	2
State income taxes, net of federal income tax benefit	1	1	—
Utility repairs expenditures	(4)	(5)	(5)
Tax credits	(3)	(4)	(4)
Self-developed software expenditures	(3)	(3)	(3)
Resolution of prior years' income tax items	—	(3)	(1)
Non-U.S. earnings taxed at lower statutory income tax rates	(3)	(2)	(2)
Allowance for equity funds used during construction	(2)	(2)	(2)
Foreign exchange and inflation effects	(2)	(2)	(2)
Share-based compensation	(2)	—	—
International tax reform	1	—	(1)
Other, net	—	(1)	(2)
Effective income tax rate	21%	20%	20%
SDG&E:			
U.S. federal statutory income tax rate	35%	35%	35%
State income taxes, net of federal income tax benefit	5	5	5
Depreciation	5	4	4
SONGS tax regulatory asset write-off	—	—	2
Repairs expenditures	(4)	(4)	(4)
Self-developed software expenditures	(3)	(3)	(3)
Allowance for equity funds used during construction	(2)	(2)	(2)
Resolution of prior years' income tax items	(1)	(2)	(2)
Variable interest entity	—	(1)	(1)
Share-based compensation	(1)	—	—
Other, net	(1)	—	—
Effective income tax rate	33%	32%	34%
SoCalGas:			
U.S. federal statutory income tax rate	35%	35%	35%
Depreciation	9	8	8
State income taxes, net of federal income tax benefit	2	4	4
Repairs expenditures	(9)	(10)	(9)
Self-developed software expenditures	(6)	(6)	(5)
Resolution of prior years' income tax items	2	(3)	(2)
Allowance for equity funds used during construction	(2)	(2)	(2)
Share-based compensation	(1)	—	—
Other, net	(1)	(1)	—
Effective income tax rate	29%	25%	29%

In 2016, 2015 and 2014, non-U.S. earnings taxed at lower statutory income tax rates than the U.S. are primarily related to operations in Mexico, Chile and Peru.

Foreign exchange and inflation effects for Sempra Energy Consolidated in 2016, 2015 and 2014 are primarily due to significant devaluation of the Mexican peso against the U.S. dollar.

Furthermore, our effective income tax rate was affected by international tax reform in Peru in 2016 and in both Peru and Chile in 2014.

We no longer plan to repatriate undistributed non-U.S. earnings and accordingly, in 2016, we reversed \$20 million of U.S. income tax expense accrued on these earnings in 2015. We intend to indefinitely reinvest cumulative

undistributed earnings from all of our non-U.S. subsidiaries and non-U.S. corporate joint ventures and use such earnings to support non-U.S. operations. Therefore, we do not intend to use these cumulative undistributed earnings as a source of funding for U.S. operations. In 2014, we made distributions of approximately \$288 million from our non-U.S. subsidiaries, \$100 million of which was from previously taxed income and therefore not subject to additional U.S. federal income tax.

In 2016, we prospectively adopted ASU 2016-09 with an effective date of January 1, 2016. ASU 2016-09 requires excess tax benefits and tax deficiencies related to employee share-based payment transactions to be recorded in earnings, instead of in shareholders' equity. We discuss the impact of adopting the provisions of this standard in Note 2.

In 2014, our effective income tax rate was affected by a \$25 million state tax benefit due to the release of Louisiana state valuation allowance against a deferred tax asset associated with Cameron LNG developments. This benefit is included in "State Income Taxes, Net of Federal Income Tax Benefit" in the Sempra Energy Consolidated table above.

Also in 2014, the effective income tax rates for Sempra Energy Consolidated and SDG&E were impacted by a \$17 million charge to reduce certain tax regulatory assets attributed to SDG&E's investment in SONGS that we discuss in Note 13. This charge is included in "Resolution of Prior Years' Income Tax Items" in the Sempra Energy Consolidated table above.

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 current effective income tax rate. As a result, changes in the relative size of these items compared to pretax income, from period to period, can cause variations in the effective income tax rate. 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
- 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
- state income taxes

The AFUDC related to equity recorded for regulated construction projects at Sempra Mexico has similar flow-through treatment.

The final decision in the 2016 General Rate Case (2016 GRC FD) issued by the CPUC in June 2016 affecting the California Utilities requires the establishment of a two-way income tax expense memorandum account for SDG&E and SoCalGas to track any revenue variances resulting from certain differences arising between the income tax expense forecasted in the 2016 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.

The account will remain open, and the balance in the account will be reviewed in subsequent general rate case (GRC) proceedings, until the CPUC decides to close the account. We believe the future disposition of these tracked balances may result in refunds being directed to ratepayers to the extent tax expense incurred is lower than forecasted tax expense in the GRC process as a result of certain flow-through item deductions, as described above, or other items. We discuss the memo account further in Note 14.

Differences arising from the forecasted amounts will be tracked in the two-way income tax expense tracking account, except for the equity portion of AFUDC, which is not subject to taxation. We expect that certain amounts recorded in the tracking account may give rise to regulatory assets or liabilities until the CPUC disposes with the account. The CPUC tracking account does not affect the recovery of income tax expense in FERC formulaic rates.

The geographic components of Income Before Income Taxes and Equity Earnings of Certain Unconsolidated Subsidiaries at Sempra Energy Consolidated are as follows:

GEOGRAPHIC COMPONENTS

(Dollars in millions)

	Pretax book income		
	Years ended December 31,		
	2016 ⁽¹⁾	2015	2014
U.S.	\$ 773	\$1,189	\$1,014
Non-U.S.	1,057	515	510
Total	\$1,830	\$1,704	\$1,524

⁽¹⁾ U.S. pretax book income decreased in 2016 at the California Utilities primarily due to the reallocation of prior years' income tax benefits generated from income tax repairs deductions to ratepayers pursuant to the 2016 GRC FD, as we discuss in Note 14; at Sempra LNG & Midstream for the loss on permanent release of pipeline capacity, as we discuss in Note 15; and the impairment charge related to the investment in Rockies Express, as we discuss in Note 3. Non-U.S. pretax book income increased in 2016 primarily due to the noncash gain associated with the remeasurement of our equity interest in GdC, as we discuss in Note 3.

The components of income tax expense are as follows:

INCOME TAX EXPENSE (BENEFIT)

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated:			
Current:			
U.S. federal	\$ —	\$ 3	\$ (10)
U.S. state	1	(24)	(7)
Non-U.S.	171	123	171
Total	172	102	154
Deferred:			
U.S. federal	78	242	237
U.S. state	9	34	4
Non-U.S.	135	(32)	(91)
Total	222	244	150
Deferred investment tax credits	(5)	(5)	(4)
Total income tax expense	\$ 389	\$ 341	\$ 300
SDG&E:			
Current:			
U.S. federal	\$ —	\$ 12	\$ (5)
U.S. state	22	77	52
Total	22	89	47
Deferred:			
U.S. federal	223	233	220
U.S. state	38	(35)	5
Total	261	198	225
Deferred investment tax credits	(3)	(3)	(2)
Total income tax expense	\$ 280	\$ 284	\$ 270
SoCalGas:			
Current:			
U.S. federal	\$ —	\$ (1)	\$ 2
U.S. state	40	12	7
Total	40	11	9
Deferred:			
U.S. federal	123	122	117
U.S. state	(18)	7	15
Total	105	129	132
Deferred investment tax credits	(2)	(2)	(2)
Total income tax expense	\$ 143	\$ 138	\$ 139

We show the components of deferred income taxes at December 31 for Sempra Energy Consolidated, SDG&E and SoCalGas in the tables below:

DEFERRED INCOME TAXES – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	December 31,	
	2016	2015
Deferred income tax liabilities:		
Differences in financial and tax bases of fixed assets, investments and other assets ⁽¹⁾	\$6,111	\$5,283
Regulatory balancing accounts	783	745
Property taxes	63	61
Other deferred income tax liabilities	143	100
Total deferred income tax liabilities	7,100	6,189
Deferred income tax assets:		
Tax credits	431	381
Net operating losses	2,304	1,856
Compensation-related items	252	252
Postretirement benefits	434	446
Other deferred income tax assets	87	179
Accrued expenses not yet deductible	112	72
Deferred income tax assets before valuation allowances	3,620	3,186
Less: valuation allowances	31	34
Total deferred income tax assets	3,589	3,152
Net deferred income tax liability ⁽²⁾	\$3,511	\$3,037

⁽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, 2016 and 2015, includes \$234 million and \$120 million, respectively, recorded as a noncurrent asset and \$3,745 million and \$3,157 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,	
	2016	2015	2016	2015
Deferred income tax liabilities:				
Differences in financial and tax bases of utility plant and other assets	\$2,549	\$2,392	\$1,699	\$1,473
Regulatory balancing accounts	379	234	411	515
Property taxes	42	42	21	20
Other	10	5	4	5
Total deferred income tax liabilities	2,980	2,673	2,135	2,013
Deferred income tax assets:				
Net operating losses	—	—	83	110
Tax credits	27	9	17	16
Postretirement benefits	98	90	244	268
Compensation-related items	8	11	32	42
State income taxes	—	46	19	13
Accrued expenses not yet deductible	7	36	20	20
Other	11	9	11	12
Total deferred income tax assets	151	201	426	481
Net deferred income tax liability	\$2,829	\$2,472	\$1,709	\$1,532

The following table summarizes our unused net operating losses (NOL) and tax credit carryforwards at December 31, 2016.

NET OPERATING LOSSES AND TAX CREDIT CARRYFORWARDS

(Dollars in millions)

	Unused amount at December 31, 2016	Year expiration begins
Sempra Energy Consolidated:		
U.S. federal ⁽¹⁾ :		
NOLs	\$5,514	2031
General business tax credits	329	2032
Foreign tax credits	62	2024
U.S. state ⁽²⁾ :		
NOLs	2,836	2017
General business tax credits	44	2017
Non-U.S. ⁽²⁾	843	2017
SDG&E:		
U.S. federal ⁽¹⁾ :		
NOLs	\$ 39	2032
General business tax credits	19	2031
SoCalGas:		
U.S. federal ⁽¹⁾ :		
NOLs	\$ 289	2032
General business tax credits	12	2031

⁽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, 2016, 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 discussed 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 \$31 million at December 31, 2016, \$1 million is related to non-U.S. NOLs and \$30 million to U.S. state NOLs and tax credits. Of Sempra Energy’s total valuation

allowance of \$34 million at December 31, 2015, \$6 million was related to non-U.S. NOLs and \$28 million to U.S. state NOLs and tax credits.

At December 31, 2016, Sempra Energy had not recognized a U.S. deferred income tax liability related to a \$4.6 billion basis difference between its financial statement and income tax investment amount in its non-U.S. subsidiaries and non-U.S. corporate joint ventures. This basis difference consists of cumulative undistributed earnings that we expect to reinvest indefinitely outside of the U.S. These cumulative undistributed earnings have previously been reinvested or will be reinvested in active non-U.S. operations, thus we do not intend to use these earnings as a source of funding for U.S. operations. It is not practical to determine the hypothetical unrecognized amount of U.S. deferred income taxes that might be payable if the cumulative undistributed earnings were eventually distributed or the investments were sold.

Following is a summary of unrecognized income tax benefits:

SUMMARY OF UNRECOGNIZED INCOME TAX BENEFITS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated:			
Total	\$ 90	\$ 87	\$ 117
Of the total, amounts related to tax positions that, if recognized in future years, would			
decrease the effective tax rate ⁽¹⁾	\$(87)	\$(83)	\$(114)
increase the effective tax rate ⁽¹⁾	36	32	21
SDG&E:			
Total	\$ 22	\$ 20	\$ 14
Of the total, amounts related to tax positions that, if recognized in future years, would			
decrease the effective tax rate ⁽¹⁾	\$(19)	\$(16)	\$ (11)
increase the effective tax rate ⁽¹⁾	13	11	6
SoCalGas:			
Total	\$ 29	\$ 27	\$ 19
Of the total, amounts related to tax positions that, if recognized in future years, would			
decrease the effective tax rate ⁽¹⁾	\$(29)	\$(27)	\$ (19)
increase the effective tax rate ⁽¹⁾	24	21	15

⁽¹⁾ Includes temporary book and tax differences that are treated as flow-through for ratemaking purposes, as discussed above.

Following is a reconciliation of the changes in unrecognized income tax benefits for the years ended December 31:

RECONCILIATION OF UNRECOGNIZED INCOME TAX BENEFITS

(Dollars in millions)

	2016	2015	2014
Sempra Energy Consolidated:			
Balance as of January 1	\$87	\$117	\$ 90
Increase in prior period tax positions	2	10	37
Decrease in prior period tax positions	(2)	—	—
Increase in current period tax positions	6	8	5
Settlements with taxing authorities	(3)	(48)	(15)
Balance as of December 31	\$90	\$ 87	\$117
SDG&E:			
Balance as of January 1	\$20	\$ 14	\$ 17
Increase in prior period tax positions	—	5	2
Increase in current period tax positions	2	2	—
Settlements with taxing authorities	—	(1)	(5)
Balance as of December 31	\$22	\$ 20	\$ 14
SoCalGas:			
Balance as of January 1	\$27	\$ 19	\$ 13
Increase in prior period tax positions	—	2	2
Decrease in prior period tax positions	(2)	—	—
Increase in current period tax positions	4	6	4
Balance as of December 31	\$29	\$ 27	\$ 19

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,		
	2016	2015	2014
Sempra Energy Consolidated:			
Expiration of statutes of limitations on tax assessments	\$ (2)	\$ (2)	\$ —
Potential resolution of audit issues with various U.S. federal, state and local and non-U.S. taxing authorities	(36)	(32)	(61)
	<u>\$ (38)</u>	<u>\$ (34)</u>	<u>\$ (61)</u>
SDG&E:			
Expiration of statutes of limitations on tax assessments	\$ (1)	\$ (1)	\$ —
Potential resolution of audit issues with various U.S. federal, state and local taxing authorities	(10)	(8)	(9)
	<u>\$ (11)</u>	<u>\$ (9)</u>	<u>\$ (9)</u>
SoCalGas:			
Potential resolution of audit issues with various U.S. federal, state and local taxing authorities	\$ (25)	\$ (22)	\$ (15)

Amounts accrued for interest and penalties associated with unrecognized income tax benefits are included in income tax expense on the Consolidated Statements of Operations. We summarize the amounts accrued at December 31 on the Consolidated Balance Sheets for interest and penalties associated with unrecognized income tax benefits and the related expense in the table below.

INTEREST AND PENALTIES ASSOCIATED WITH UNRECOGNIZED INCOME TAX BENEFITS

(Dollars in millions)

	Interest and penalties			Accrued interest and penalties	
	Years ended December 31,			December 31,	
	2016	2015	2014	2016	2015
Sempra Energy Consolidated:					
Interest (income) expense	\$ —	\$ (2)	\$ (4)	\$ 1	\$ 1
Penalties	—	—	(3)	—	—
SDG&E:					
Interest income	\$ —	\$ —	\$ (1)	\$ —	\$ —

Penalties accrued and expensed at SDG&E and interest and penalties accrued and expensed at SoCalGas in all periods presented were zero or negligible.

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.

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 2010. 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 1996 through 2010.

In addition, we have filed federal refund claims for the 2009 and 2010 tax years; however, no additional tax may be assessed by the Internal Revenue Service (IRS) for pre-2011 tax years. We have also filed state refund claims for tax

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 2010 and by state tax jurisdictions for tax years after 2008.

NOTE 7. EMPLOYEE BENEFIT PLANS

We are required by applicable U.S. GAAP to:

- 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 (with limited exceptions); and

- recognize changes in the funded status of pension and other postretirement benefit plans in the year in which the changes occur. Generally, those changes are reported in other comprehensive income and as a separate component of shareholders' equity.

The detailed information presented below covers the employee benefit plans of Sempra Energy and its principal 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 other postretirement benefit plans (PBOP), 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 which 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 \$430 million and \$464 million at December 31, 2016 and 2015, respectively.

PENSION AND OTHER POSTRETIREMENT BENEFIT PLANS

Divestiture Affecting 2016

On September 12, 2016, Sempra LNG & Midstream completed the sale of EnergySouth, the parent company of Mobile Gas and Willmut Gas, as we discuss in Note 3. The benefit obligations and plan assets of the benefit plans that covered employees of Mobile Gas and Willmut Gas were transferred to the buyer on the date of sale. This resulted in decreases to the recorded pension liability and other postretirement benefit plan liability of \$61 million and \$6 million, respectively, and decreases to pension plan assets and other postretirement benefit plan assets of \$44 million and \$4 million, respectively, for Sempra Energy Consolidated.

Special Termination Benefits Affecting 2016

In 2016, certain nonrepresented 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 that year 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 other postretirement benefits of \$26 million for Sempra Energy Consolidated, \$14 million for SDG&E and \$11 million for SoCalGas.

The Voluntary Retirement Enhancement Program resulted in a higher than expected number of retirements in December 2016. As a result, the total lump sum benefits paid from the SDG&E qualified pension plan in 2016 exceeded the settlement threshold, which triggered settlement accounting and a resulting reduction of the recorded pension liability and pension plan assets of \$75 million and a settlement charge of \$16 million at each of Sempra Energy Consolidated and SDG&E. This settlement charge was recorded as a regulatory asset on the Consolidated Balance Sheets. A measurement date of December 31, 2016 was used for the settlement accounting, as the year-to-date lump sum benefit payments first exceeded the settlement threshold in December 2016.

Benefit Plan Amendments Affecting 2015

In 2015, executive participants in a company nonqualified pension plan became eligible in this same plan for Supplemental Executive Retirement Plan benefits.

Consistent with past practice, this was treated as a plan amendment and increased the recorded pension liability by \$5 million at Sempra Energy Consolidated and \$3 million at SoCalGas.

Effective January 1, 2016, the point of service medical benefit provided to retirees under the age of 65 at our domestic companies, except the represented retirees at

SDG&E and retirees enrolled in one of the high deductible medical plans at SoCalGas, is no longer provided by the PBOP plans of the respective companies. This change resulted in a decrease in other postretirement benefit obligations of \$9 million at each of Sempra Energy Consolidated and SoCalGas, and by a negligible amount at SDG&E.

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 2016 and 2015, and a statement of the funded status at December 31, 2016 and 2015:

PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$ 3,649	\$ 3,839	\$ 963	\$1,115
Service cost	107	114	20	26
Interest cost	160	154	42	44
Contributions from plan participants	—	—	20	19
Actuarial loss (gain)	116	(180)	(81)	(172)
Benefit payments	(217)	(273)	(61)	(60)
Divestiture of EnergySouth	(61)	—	(6)	—
Plan amendments	—	5	—	(9)
Special termination benefits	—	—	26	—
Settlements	(75)	(10)	(1)	—
Net obligation at December 31	3,679	3,649	922	963
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	2,484	2,807	1,003	1,054
Actual return on plan assets	207	(73)	94	(21)
Employer contributions	104	33	6	11
Contributions from plan participants	—	—	20	19
Benefit payments	(217)	(273)	(61)	(60)
Divestiture of EnergySouth	(44)	—	(4)	—
Settlements	(75)	(10)	(1)	—
Fair value of plan assets at December 31	2,459	2,484	1,057	1,003
Funded status at December 31	\$(1,220)	\$(1,165)	\$ 135	\$ 40
Net recorded (liability) asset at December 31	\$(1,220)	\$(1,165)	\$ 135	\$ 40

**PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS
SAN DIEGO GAS & ELECTRIC COMPANY**

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$ 965	\$1,011	\$165	\$200
Service cost	29	29	5	7
Interest cost	41	39	7	8
Contributions from plan participants	—	—	7	7
Actuarial loss (gain)	7	(52)	6	(43)
Benefit payments	(25)	(56)	(14)	(14)
Special termination benefits	—	—	14	—
Settlements	(75)	—	—	—
Transfer of liability to other plans	(7)	(6)	—	—
Net obligation at December 31	935	965	190	165
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	752	828	161	164
Actual return on plan assets	59	(24)	13	(3)
Employer contributions	3	2	2	7
Contributions from plan participants	—	—	7	7
Benefit payments	(25)	(56)	(14)	(14)
Settlements	(75)	—	—	—
Transfer of assets from other plans	—	2	—	—
Fair value of plan assets at December 31	714	752	169	161
Funded status at December 31	\$(221)	\$ (213)	\$(21)	\$ (4)
Net recorded liability at December 31	\$(221)	\$ (213)	\$(21)	\$ (4)

**PROJECTED BENEFIT OBLIGATION, FAIR VALUE OF ASSETS AND FUNDED STATUS
SOUTHERN CALIFORNIA GAS COMPANY**

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
CHANGE IN PROJECTED BENEFIT OBLIGATION				
Net obligation at January 1	\$2,255	\$2,398	\$752	\$ 866
Service cost	67	74	14	17
Interest cost	101	98	32	34
Contributions from plan participants	—	—	13	12
Actuarial loss (gain)	77	(131)	(86)	(125)
Benefit payments	(158)	(187)	(45)	(43)
Plan amendments	—	3	—	(9)
Special termination benefits	—	—	11	—
Transfer of liability from other plans	1	—	—	—
Net obligation at December 31	2,343	2,255	691	752
CHANGE IN PLAN ASSETS				
Fair value of plan assets at January 1	1,537	1,763	822	870
Actual return on plan assets	128	(45)	79	(18)
Employer contributions	72	6	1	1
Contributions from plan participants	—	—	13	12
Benefit payments	(158)	(187)	(45)	(43)
Fair value of plan assets at December 31	1,579	1,537	870	822
Funded status at December 31	\$(764)	\$ (718)	\$179	\$ 70
Net recorded (liability) asset at December 31	\$(764)	\$ (718)	\$179	\$ 70

Actuarial losses (gains) 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 2015 and 2016, the Society of Actuaries released updated mortality improvement projection scales, reflecting 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 losses in pension plans at Sempra Energy Consolidated in 2016 were driven primarily by losses at SoCalGas due to a decrease in discount rate. Actuarial gains in other postretirement benefit plans at Sempra Energy Consolidated in 2016 were driven primarily by gains at SoCalGas due to a lower increase in health care costs than expected.

Net Assets and Liabilities

The assets and liabilities of the pension and other postretirement benefit 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 other postretirement benefit plans use the asset smoothing method, except for those at SDG&E and the other postretirement benefit plan at Mobile Gas (until the date of sale). 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 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 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 Accumulated Other Comprehensive Income (Loss) on the balance sheet. The California Utilities and Mobile Gas (until the date of sale) 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 agreements with regulatory agencies. At Willmut Gas (until the date of sale), pension contributions were recovered in rates on a prospective basis, but were not recorded as a regulatory asset pending recovery.

The California Utilities record annual pension and other postretirement net periodic benefit costs equal to the contributions to their 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 the other postretirement 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 other postretirement benefit plans. Until the date of sale, Mobile Gas recorded annual pension and other postretirement net periodic benefit costs based on an estimate of the net periodic cost at the beginning of the year calculated in accordance with U.S. GAAP for pension and other postretirement benefit plans, as authorized by the Alabama Public Service Commission. 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 AT DECEMBER 31

(Dollars in millions)

	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Sempra Energy Consolidated:				
Noncurrent assets	\$ —	\$ —	\$179	\$ 70
Current liabilities	(56)	(43)	—	—
Noncurrent liabilities	(1,164)	(1,122)	(44)	(30)
Net recorded (liability) asset	\$ (1,220)	\$ (1,165)	\$135	\$ 40
SDG&E:				
Current liabilities	\$ (10)	\$ (5)	\$ —	\$ —
Noncurrent liabilities	(211)	(208)	(21)	(4)
Net recorded liability	\$ (221)	\$ (213)	\$ (21)	\$ (4)
SoCalGas:				
Noncurrent assets	\$ —	\$ —	\$179	\$ 70
Current liabilities	(2)	(2)	—	—
Noncurrent liabilities	(762)	(716)	—	—
Net recorded (liability) asset	\$ (764)	\$ (718)	\$179	\$ 70

Amounts recorded in Accumulated Other Comprehensive Income (Loss) at December 31, 2016 and 2015, 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	
	2016	2015	2016	2015
Sempra Energy Consolidated:				
Net actuarial (loss) gain	\$ (95)	\$ (84)	\$ 3	\$ 2
Prior service cost	(4)	(5)	—	—
Total	\$ (99)	\$ (89)	\$ 3	\$ 2
SDG&E:				
Net actuarial loss	\$ (8)	\$ (8)		
Prior service cost	—	—		
Total	\$ (8)	\$ (8)		
SoCalGas:				
Net actuarial loss	\$ (6)	\$ (4)		
Prior service cost	(3)	(1)		
Total	\$ (9)	\$ (5)		

The accumulated benefit obligation for defined benefit pension plans at December 31, 2016 and 2015 was as follows:

ACCUMULATED BENEFIT OBLIGATION

(Dollars in millions)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	2016	2015	2016	2015	2016	2015
Accumulated benefit obligation	\$3,465	\$3,397	\$904	\$939	\$2,167	\$2,056

Sempra Energy, SDG&E and SoCalGas each have a funded pension plan. Mobile Gas had a funded pension plan until it was sold in September 2016. We also have unfunded pension plans at Sempra Energy, SDG&E, SoCalGas, IEnova and Chilquinta Energía. 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>		
	2016	2015
Sempra Energy Consolidated:		
Projected benefit obligation	\$3,431	\$3,410
Accumulated benefit obligation	3,227	3,183
Fair value of plan assets	2,459	2,484
SDG&E:		
Projected benefit obligation	\$ 902	\$ 927
Accumulated benefit obligation	874	906
Fair value of plan assets	714	752
SoCalGas:		
Projected benefit obligation	\$2,320	\$2,236
Accumulated benefit obligation	2,148	2,039
Fair value of plan assets	1,579	1,537

Net Periodic Benefit Cost

The following three tables provide the components of net periodic benefit cost and pretax amounts recognized in Other Comprehensive Income (Loss) for the years ended December 31:

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)						
SEMPRA ENERGY CONSOLIDATED						
<i>(Dollars in millions)</i>						
	Pension benefits			Other postretirement benefits		
	2016	2015	2014	2016	2015	2014
NET PERIODIC BENEFIT COST						
Service cost	\$ 107	\$ 114	\$ 101	\$ 20	\$ 26	\$ 24
Interest cost	160	154	161	42	44	49
Expected return on assets	(166)	(173)	(171)	(69)	(68)	(63)
Amortization of:						
Prior service cost (credit)	11	11	11	—	(4)	(5)
Actuarial loss (gain)	30	38	18	(1)	—	—
Settlement and curtailment charges	16	4	31	—	—	(1)
Special termination benefits	—	—	—	26	—	5
Regulatory adjustment	(57)	(110)	(31)	(11)	12	6
Total net periodic benefit cost	101	38	120	7	10	15
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)						
Net loss (gain)	26	17	38	(2)	(4)	1
Prior service (credit) cost	(1)	4	4	—	—	—
Amortization of actuarial loss	(10)	(14)	(23)	—	—	—
Total recognized in other comprehensive income (loss)	15	7	19	(2)	(4)	1
Total recognized in net periodic benefit cost and other comprehensive income (loss)	\$ 116	\$ 45	\$ 139	\$ 5	\$ 6	\$ 16

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)
SAN DIEGO GAS & ELECTRIC COMPANY

(Dollars in millions)

	Pension benefits			Other postretirement benefits		
	2016	2015	2014	2016	2015	2014
NET PERIODIC BENEFIT COST						
Service cost	\$ 29	\$ 29	\$ 30	\$ 5	\$ 7	\$ 7
Interest cost	41	39	43	7	8	9
Expected return on assets	(49)	(54)	(55)	(12)	(11)	(10)
Amortization of:						
Prior service cost	1	8	2	3	3	2
Actuarial loss (gain)	10	2	4	(1)	—	—
Settlement charge	16	—	19	—	—	—
Special termination benefits	—	—	—	14	—	5
Regulatory adjustment	(45)	(20)	12	(14)	—	1
Total net periodic benefit cost	3	4	55	2	7	14
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)						
Net loss (gain)	1	(6)	8	—	—	—
Amortization of actuarial loss	(1)	(1)	(3)	—	—	—
Total recognized in other comprehensive (loss) income	—	(7)	5	—	—	—
Total recognized in net periodic benefit cost and other comprehensive (loss) income	\$ 3	\$ (3)	\$ 60	\$ 2	\$ 7	\$ 14

NET PERIODIC BENEFIT COST AND AMOUNTS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)
SOUTHERN CALIFORNIA GAS COMPANY

(Dollars in millions)

	Pension benefits			Other postretirement benefits		
	2016	2015	2014	2016	2015	2014
NET PERIODIC BENEFIT COST						
Service cost	\$ 67	\$ 74	\$ 60	\$ 14	\$ 17	\$ 16
Interest cost	101	98	100	32	34	38
Expected return on assets	(103)	(106)	(104)	(56)	(56)	(51)
Amortization of:						
Prior service cost (credit)	9	9	9	(4)	(7)	(8)
Actuarial loss	11	21	6	—	—	—
Settlement charge	—	—	4	—	—	—
Special termination benefits	—	—	—	11	—	—
Regulatory adjustment	(12)	(90)	(43)	3	12	5
Total net periodic benefit cost	73	6	32	—	—	—
CHANGES IN PLAN ASSETS AND BENEFIT OBLIGATIONS RECOGNIZED IN OTHER COMPREHENSIVE INCOME (LOSS)						
Net loss	4	—	5	—	—	—
Prior service cost	2	2	—	—	—	—
Amortization of actuarial loss	—	—	(5)	—	—	—
Total recognized in other comprehensive income	6	2	—	—	—	—
Total recognized in net periodic benefit cost and other comprehensive income	\$ 79	\$ 8	\$ 32	\$ —	\$ —	\$ —

The estimated net loss for the pension and other postretirement benefit plans that will be amortized from Accumulated Other Comprehensive Income (Loss) into net periodic benefit cost in 2017 is \$10 million for Sempra Energy Consolidated and \$1 million for each of SDG&E and

SoCalGas. The estimated prior service cost that will be similarly amortized in 2017 is \$1 million for each of Sempra Energy Consolidated and SoCalGas and a negligible amount for SDG&E.

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 which:

- 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 which 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.

The significant assumptions affecting benefit obligation and net periodic benefit cost are as follows:

- Recent events have caused significant price volatility to which rating agencies have not reacted.
- 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.

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.

WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE BENEFIT OBLIGATION AT DECEMBER 31

	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Sempra Energy Consolidated:				
Discount rate	4.08%	4.46%	4.19%	4.49%
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SDG&E:				
Discount rate	4.08%	4.35%	4.15%	4.50%
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00
SoCalGas:				
Discount rate	4.10%	4.50%	4.20%	4.50%
Rate of compensation increase	2.00-10.00	2.00-10.00	2.00-10.00	2.00-10.00

**WEIGHTED-AVERAGE ASSUMPTIONS USED TO DETERMINE NET PERIODIC BENEFIT COST
YEARS ENDED DECEMBER 31**

	Pension benefits			Other postretirement benefits		
	2016	2015	2014	2016	2015	2014
Sempra Energy Consolidated:						
Discount rate	4.46%	4.09%	4.85%	4.49%	4.15%	4.95%
Expected return on plan assets	7.00	7.00	7.00	6.98	6.98	6.97
Rate of compensation increase	2.00-10.00	2.00-10.00	3.50-10.00	2.00-10.00	2.00-10.00	3.50-10.00
SDG&E:						
Discount rate	4.35%	4.00%	4.69%	4.50%	4.15%	5.00%
Expected return on plan assets	7.00	7.00	7.00	6.90	6.91	6.88
Rate of compensation increase	2.00-10.00	2.00-10.00	3.50-10.00	2.00-10.00	2.00-10.00	3.50-10.00
SoCalGas:						
Discount rate	4.50%	4.15%	4.94%	4.50%	4.15%	4.95%
Expected return on plan assets	7.00	7.00	7.00	7.00	7.00	7.00
Rate of compensation increase	2.00-10.00	2.00-10.00	3.50-10.00	2.00-10.00	2.00-10.00	3.50-10.00

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 ⁽¹⁾					
	Pre-65 retirees			Retirees aged 65 years and older		
	2016	2015	2014	2016	2015	2014
Health care cost trend rate assumed for next year	8.00%	8.10%	7.75%	5.50%	5.50%	5.25%
Rate to which the cost trend rate is assumed to decline (the ultimate trend)	5.00%	5.00%	5.00%	4.50%	4.50%	4.50%
Year the rate reaches the ultimate trend	2022	2022	2020	2022	2022	2020

⁽¹⁾ Excludes Mobile Gas plan. For Mobile Gas, which we deconsolidated on September 12, 2016, the health care cost trend rate assumed for next year for all retirees was 8.10 percent and 7.75 percent in 2015 and 2014, respectively; the ultimate trend was 5.00 percent in 2015 and 2014; and the year the rate reaches the ultimate trend was 2022 and 2020 in 2015 and 2014, respectively. For Chilquinta Energia, the health care cost trend rate assumed for next year, and the ultimate trend, was 3.00 percent in each of 2016, 2015 and 2014.

A one-percent change in assumed health care cost trend rates would have had the following effects in 2016:

EFFECT OF ONE-PERCENT CHANGE IN ASSUMED HEALTH CARE COST TREND RATES

(Dollars in millions)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	1% increase	1% decrease	1% increase	1% decrease	1% increase	1% decrease
Effect on total of service and interest cost components of net periodic postretirement health care benefit cost	\$ 5	\$ (4)	\$1	\$(1)	\$ 4	\$(3)
Effect on the health care component of the accumulated other postretirement benefit obligations	62	(52)	6	(5)	55	(46)

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 other postretirement benefit plans. We maintain additional trusts as we discuss below for certain of the California Utilities' other postretirement benefit 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

- 38 percent domestic equity
- 26 percent international equity
- 18 percent long credit
- 8 percent ultra-long duration government securities
- 5 percent global high yield credit
- 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
- a range of expected outcomes over varying confidence levels

We maintain 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 other postretirement benefit 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' other postretirement benefit 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. The assets in the Voluntary Employee Beneficiary Association trusts are invested at an allocation similar to the pension master trust, with 75 percent invested in return-seeking and 25 percent invested in risk-mitigating assets. This allocation is 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' other postretirement benefit plans based on the fair value hierarchy, except for certain investments measured at net asset value (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 flows 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 for equity and certain fixed income securities or are valued under a discounted cash flows 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. Where the value is a quoted price in an active market, the investment is classified within Level 1 of the fair value hierarchy.

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.

Venture Capital Funds – These funds consist of investments in private equities that are held by limited partnerships following various strategies, including venture capital and corporate finance. The 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.

Real Estate Funds – Investments in real estate funds are valued at NAV per share, based on the fair value of the underlying investments.

Derivative Financial Instruments – 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 future contracts are valued at the last sales price quoted on the exchange on which they primarily trade.

The methods described are intended to produce a fair value calculation that is indicative of net realizable value or reflective of fair values. However, while management believes the valuation methods 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 10. 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.

There were no transfers into or out of Level 1, Level 2 or Level 3 for Sempra Energy Consolidated, SDG&E or SoCalGas during the periods presented, except for investments measured at NAV as required by ASU 2015-07, which we adopted retrospectively as of January 1, 2016 and discuss in Note 2. There were no changes in the valuation techniques used in recurring fair value measurement.

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, 2016		
	Level 1	Level 2	Total
Sempra Energy Consolidated:			
Equity securities:			
Domestic	\$ 884	\$ —	\$ 884
International	522	—	522
Registered investment companies	127	—	127
Fixed income securities:			
Domestic government bonds	214	32	246
International government bonds	—	9	9
Domestic corporate bonds	—	346	346
International corporate bonds	—	94	94
Registered investment companies	—	14	14
Total investment assets in the fair value hierarchy	<u>\$1,747</u>	<u>\$495</u>	2,242
Investments measured at NAV ⁽¹⁾ :			
Common/collective trusts			223
Venture capital funds and real estate funds			4
Total investment assets ⁽²⁾			<u>\$2,469</u>
SDG&E's proportionate share of investment assets			\$ 717
SoCalGas' proportionate share of investment assets			\$1,585

	Fair value at December 31, 2015		
	Level 1	Level 2	Total
Sempra Energy Consolidated:			
Equity securities:			
Domestic	\$ 893	\$ 7	\$ 900
International	543	1	544
Registered investment companies	124	—	124
Fixed income securities:			
Domestic government bonds	124	31	155
International government bonds	—	10	10
Domestic corporate bonds	—	338	338
International corporate bonds	—	100	100
Registered investment companies	—	7	7
Other	1	—	1
Total investment assets in the fair value hierarchy	<u>\$1,685</u>	<u>\$494</u>	2,179
Investments measured at NAV ⁽¹⁾ :			
Common/collective trusts			312
Venture capital funds and real estate funds			4
Total investment assets ⁽³⁾			<u>\$2,495</u>
SDG&E's proportionate share of investment assets ⁽⁴⁾			\$ 753
SoCalGas' proportionate share of investment assets			\$1,544

⁽¹⁾ Reflects the retrospective adoption of ASU 2015-07 as of January 1, 2016, as we discuss in Note 2. Prior to adoption, we included investments measured at NAV within the fair value hierarchy.

⁽²⁾ Excludes cash and cash equivalents of \$14 million and accounts payable of \$24 million.

⁽³⁾ Excludes cash and cash equivalents of \$14 million and accounts payable of \$25 million.

⁽⁴⁾ Excludes transfers receivable from other plans of \$2 million at SDG&E.

The fair values by asset category of the other postretirement benefit plan assets held in the pension master trust and in the additional trusts for SoCalGas' other postretirement benefit plans and SDG&E's other postretirement benefit plan (PBOP plan trusts) are as follows:

FAIR VALUE MEASUREMENTS – INVESTMENT ASSETS OF OTHER POSTRETIREMENT BENEFIT PLANS

(Dollars in millions)

	Fair value at December 31, 2016		
	Level 1	Level 2	Total
SDG&E:			
Equity securities:			
Domestic	\$ 41	\$ —	\$ 41
International	24	—	24
Registered investment companies	46	—	46
Fixed income securities:			
Domestic government bonds	10	1	11
Domestic corporate bonds	—	16	16
International corporate bonds	—	3	3
Registered investment companies	—	17	17
Total investment assets in the fair value hierarchy	121	37	158
Investments measured at NAV – Common/collective trusts ⁽¹⁾			11
Total investment assets ⁽²⁾			169
SoCalGas:			
Equity securities:			
Domestic	130	—	130
International	77	—	77
Registered investment companies	46	—	46
Fixed income securities:			
Domestic government bonds	52	8	60
International government bonds	—	2	2
Domestic corporate bonds	—	94	94
International corporate bonds	—	28	28
Registered investment companies	—	47	47
Total investment assets in the fair value hierarchy	305	179	484
Investments measured at NAV – Common/collective trusts ⁽¹⁾			386
Total investment assets ⁽³⁾			870
Other Sempra Energy:			
Equity securities:			
Domestic	6	—	6
International	3	—	3
Fixed income securities:			
Domestic government bonds	1	—	1
International government bonds	—	1	1
Domestic corporate bonds	—	2	2
International corporate bonds	—	1	1
Registered investment companies	—	1	1
Total investment assets in the fair value hierarchy	10	5	15
Investments measured at NAV – Common/collective trusts ⁽¹⁾			3
Total other Sempra Energy investment assets			18
Total Sempra Energy Consolidated investment assets in the fair value hierarchy	\$436	\$221	
Total Sempra Energy Consolidated investment assets ⁽⁴⁾			\$1,057

⁽¹⁾ Reflects the retrospective adoption of ASU 2015-07 as of January 1, 2016, as we discuss in Note 2. Prior to adoption, we included investments measured at NAV within the fair value hierarchy.

⁽²⁾ Excludes cash and cash equivalents of \$1 million and accounts payable of \$1 million held in SDG&E PBOP plan trusts.

⁽³⁾ Excludes cash and cash equivalents of \$4 million and accounts payable of \$4 million held in SoCalGas PBOP plan trusts.

⁽⁴⁾ Excludes cash and cash equivalents of \$5 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, 2015		
	Level 1	Level 2	Total
SDG&E:			
Equity securities:			
Domestic	\$ 39	\$ —	\$ 39
International	24	—	24
Registered investment companies	41	—	41
Fixed income securities:			
Domestic government bonds	5	3	8
Domestic corporate bonds	—	15	15
International corporate bonds	—	4	4
Registered investment companies	—	16	16
Total investment assets in the fair value hierarchy	109	38	147
Investments measured at NAV – Common/collective trusts ⁽¹⁾			14
Total investment assets ⁽²⁾			161
SoCalGas:			
Equity securities:			
Domestic	123	1	124
International	74	—	74
Registered investment companies	43	—	43
Fixed income securities:			
Domestic government bonds	42	7	49
International government bonds	—	2	2
Domestic corporate bonds	—	87	87
International corporate bonds	—	28	28
Registered investment companies	—	49	49
Total investment assets in the fair value hierarchy	282	174	456
Investments measured at NAV – Common/collective trusts ⁽¹⁾			367
Total investment assets ⁽³⁾			823
Other Sempra Energy:			
Equity securities:			
Domestic	5	1	6
International	3	—	3
Registered investment companies	4	—	4
Fixed income securities:			
Domestic government bonds	2	—	2
International government bonds	—	1	1
Domestic corporate bonds	—	1	1
International corporate bonds	—	1	1
Registered investment companies	—	1	1
Total investment assets in the fair value hierarchy	14	5	19
Investments measured at NAV – Common/collective trusts ⁽¹⁾			1
Total other Sempra Energy investment assets			20
Total Sempra Energy Consolidated investment assets in the fair value hierarchy	\$405	\$217	
Total Sempra Energy Consolidated investment assets ⁽⁴⁾			\$1,004

⁽¹⁾ Reflects the retrospective adoption of ASU 2015-07 as of January 1, 2016, as we discuss in Note 2. Prior to adoption, we included investments measured at NAV within the fair value hierarchy.

⁽²⁾ Excludes cash and cash equivalents of \$1 million and accounts payable of \$1 million held in SDG&E PBOP plan trusts.

⁽³⁾ Excludes cash and cash equivalents of \$3 million and accounts payable of \$4 million held in SoCalGas PBOP plan trusts.

⁽⁴⁾ Excludes cash and cash equivalents of \$4 million and accounts payable of \$5 million at Sempra Energy Consolidated.

Future Payments

We expect to contribute the following amounts to our pension and other postretirement benefit plans in 2017:

EXPECTED CONTRIBUTIONS			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated	SDG&E	SoCalGas
Pension plans	\$180	\$38	\$90
Other postretirement benefit plans	8	5	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
2017	\$ 347	\$ 47	\$ 94	\$10	\$194	\$ 35
2018	317	51	84	11	189	37
2019	304	53	81	11	184	38
2020	291	56	77	12	175	39
2021	295	55	73	12	177	40
2022-2026	1,254	277	322	61	804	203

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 return on equity, 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 \$5 million for 2016, \$3 million for 2015 and \$4 million for 2014 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 \$10 million in each of 2016, 2015 and 2014 related to this plan.

SAVINGS PLANS

Sempra Energy offers trusteed savings plans to all domestic employees and to employees in Mexico. Participation in the

plans is immediate for salary deferrals for all employees except for the represented employees at SoCalGas, who are eligible upon completion of one year of service. Subject to plan provisions, domestic employees may contribute from one percent to 50 percent of their eligible earnings, subject to annual IRS limits. In Mexico, employees may contribute up to 2 percent of the portion of their base salary that is less than 25 times the minimum wage and may contribute up to 5 percent of any portion of their base salary that is greater than 25 times the minimum wage.

Through March 27, 2015, Sempra Energy made matching contributions for all domestic employees after one year of the employee's completed service. Beginning March 28, 2015, Sempra Energy makes matching contributions for domestic employees immediately as of the date of hire, except for represented employees at SoCalGas, who continue to receive matching contributions after one year of the employee's completed service. Sempra Energy continues to make matching contributions immediately for employees in Mexico.

Also beginning March 28, 2015, employer contribution amounts for domestic employees, except for the represented employees at SoCalGas and employees at Mobile Gas (until the date of sale), are equal to 50 percent of the first 6 percent, plus 20 percent of the next 5 percent, of eligible earnings contributed by employees. Prior to that, employer

contribution amounts for these employees were 50 percent of the first 6 percent of eligible earnings contributed by the employees and, if certain company goals were met, an additional amount related to incentive compensation payments. Employer contribution amounts for represented employees at SoCalGas and employees at Mobile Gas (until the date of sale) remain generally equal to 50 percent of the first 6 percent of eligible earnings contributed by employees. Employees at Mobile Gas also continued to receive an additional amount related to incentive compensation payments if certain company goals were met. Employer contributions for employees in Mexico remain equal to the contributions made by the employee.

Contributions to the savings plans were as follows:

CONTRIBUTIONS TO SAVINGS PLANS			
<i>(Dollars in millions)</i>			
	2016	2015	2014
Sempra Energy Consolidated	\$42	\$43	\$38
SDG&E	15	17	15
SoCalGas	22	21	18

The market value of Sempra Energy common stock held by the savings plans was \$1.1 billion at both December 31, 2016 and 2015.

NOTE 8. 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 (RSAs)
- restricted stock units (RSUs)
- stock appreciation rights
- performance awards
- stock payments
- 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, 2016, Sempra Energy had the following types of equity awards outstanding:

- *Non-Qualified Stock Options*: Options 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, in accordance with the terms of the grant, or upon eligibility for retirement. Options are subject to forfeiture or earlier expiration when an employee terminates employment.

- *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 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 Standard & Poor's (S&P) 500 Utilities Index and the S&P 500 Index. We primarily 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 during or after 2015 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 vest to the extent that the Compensation Committee of Sempra Energy's Board of Directors determines that the objectives of the joint venture are continuing to be achieved. These awards vest on the anniversary of the grant date over a period of either two or three years.
- The 2015 awards vest to the extent that 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 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) or four-year service periods.
- *Restricted Stock Awards:* RSAs are solely service-based and are generally exercisable 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 shares that become subject to the same vesting conditions as the RSAs and RSUs to which the dividends relate.

In April 2013, the IEnova board of directors approved the IEnova 2013 Long-Term Incentive Plan. The purpose of this plan is 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 2016, 2015 and 2014, IEnova issued 378,367 RSUs, 278,538 RSUs and 468,339 RSUs, respectively, from this plan,

698,838 of which remain outstanding at December 31, 2016. During 2016, 2015 and 2014, IEnova paid cash of \$1 million, \$4 million and \$3 million, respectively, to settle vested awards.

SHARE-BASED AWARDS AND COMPENSATION EXPENSE

At December 31, 2016, 5,627,118 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 and RSAs and RSUs on a straight-line basis over the requisite service period of the award, which is generally three or four years. However, in the year that an employee becomes eligible for retirement, the remaining expense related to the employee's awards is recognized immediately. 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.

As we discuss in Note 2, we prospectively adopted ASU 2016-09 effective January 1, 2016, which requires that 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. Prior to adoption, we recorded excess tax benefits from share-based compensation within Sempra Energy's Shareholders' Equity. In 2016, we recognized \$34 million in excess tax benefits in earnings. In 2015, \$52 million in excess tax benefits was recorded within Sempra Energy's Shareholders' Equity. In 2014, there were no realized excess tax benefits.

Total share-based compensation expense for all of Sempra Energy's share-based awards was comprised as follows:

SHARE-BASED COMPENSATION EXPENSE – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions, except per share amounts)

	Years ended December 31,		
	2016	2015	2014
Share-based compensation expense, before income taxes	\$ 46	\$ 48	\$ 46
Income tax benefit	(18)	(19)	(18)
	<u>\$ 28</u>	<u>\$ 29</u>	<u>\$ 28</u>
Excess income tax benefit	<u>\$(34)</u>	<u>\$ —</u>	<u>\$ —</u>

Sempra Energy Consolidated's capitalized share-based compensation cost was \$7 million in 2016, \$6 million in 2015 and \$5 million in 2014.

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. Expenses and capitalized compensation costs recorded by SDG&E and SoCalGas were as follows:

SHARE-BASED COMPENSATION EXPENSE – SDG&E AND SOCIALGAS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
SDG&E:			
Share-based compensation expense, before income taxes	\$ 7	\$ 8	\$ 8
Income tax benefit	(3)	(3)	(3)
	<u>\$ 4</u>	<u>\$ 5</u>	<u>\$ 5</u>
Capitalized share-based compensation cost	\$ 4	\$ 4	\$ 3
SoCalGas:			
Share-based compensation expense, before income taxes	\$ 8	\$ 10	\$ 8
Income tax benefit	(3)	(4)	(3)
	<u>\$ 5</u>	<u>\$ 6</u>	<u>\$ 5</u>
Capitalized share-based compensation cost	\$ 3	\$ 2	\$ 2

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 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, 2016 and activity for the year then ended:

NON-QUALIFIED STOCK OPTIONS

	Shares under option	Weighted-average exercise price	Weighted-average remaining contractual term (in years)	Aggregate intrinsic value (in millions)
Outstanding at January 1, 2016	527,997	\$53.62		
Exercised	<u>(167,742)</u>	\$56.11		
Outstanding at December 31, 2016	<u>360,255</u>	\$52.46	2.0	\$17
Vested at December 31, 2016	360,255	\$52.46	2.0	\$17
Exercisable at December 31, 2016	360,255	\$52.46	2.0	\$17

The aggregate intrinsic value at December 31, 2016 is the total of the difference between Sempra Energy's closing 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

- \$8 million in 2016
- \$12 million in 2015
- \$33 million in 2014

No stock options were granted in 2016, 2015 or 2014. All outstanding stock options were fully vested and all compensation cost related to stock options had been recognized as of December 31, 2014. The total fair value of shares vested in 2014 was \$1 million.

We received cash of \$9 million from stock option exercises during 2016.

SEMPRA ENERGY RESTRICTED STOCK AWARDS AND UNITS

We use a Monte-Carlo simulation model to estimate the fair value of our RSAs and RSUs. Our determination of fair value is affected by the historical volatility of the 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 awards granted in 2016, 2015 and 2014 for Sempra Energy:

KEY ASSUMPTIONS FOR AWARDS GRANTED

	Years ended December 31,		
	2016	2015	2014
Risk-free rate of return	1.3%	1.1%	1.2%
Stock price volatility	16	14	16

Restricted Stock Awards

We provide below a summary of Sempra Energy's RSAs at December 31, 2016 and the activity during the year.

RESTRICTED STOCK AWARDS

	Shares	Weighted-average grant-date fair value
Nonvested at January 1, 2016	1,537	\$75.87
Vested	(1,537)	\$75.87
Nonvested at December 31, 2016	—	\$ —

No RSAs were granted in 2016, 2015 or 2014. All outstanding RSAs were fully vested and all compensation cost related to RSAs has been recognized as of December 31, 2016. The total fair value of shares vested during the year was a negligible amount in 2016 and \$1 million in each of 2015 and 2014.

Restricted Stock Units

We provide below a summary of Sempra Energy's RSUs as of December 31, 2016 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, 2016	2,271,675	\$ 73.28	348,806	\$80.14
Granted	467,830	\$100.37	95,876	\$93.59
Vested	(761,042)	\$ 49.28	(135,456)	\$65.20
Forfeited	(24,141)	\$115.73	(3,490)	\$90.58
Nonvested at December 31, 2016 ⁽¹⁾	1,954,322	\$ 88.58	305,736	\$94.68
Expected to vest at December 31, 2016	1,883,636	\$ 88.07	293,822	\$90.58

⁽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 50 percent (100 percent for awards granted during or after 2014) of the shares represented by the RSUs may be issued if Sempra Energy exceeds target performance conditions.

The total fair value of shares vested during the year was \$46 million in each of 2016 and 2015 and \$33 million in 2014.

The \$34 million of total compensation cost related to nonvested RSUs not yet recognized as of December 31, 2016 is expected to be recognized over a weighted-average period of 1.5 years. The weighted-average per-share fair values for performance-based RSUs granted were \$123.30 and \$88.01 in 2015 and 2014, respectively. The weighted-average per-share fair values for service-based RSUs granted were \$111.43 and \$91.54 in 2015 and 2014, respectively.

NOTE 9. 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 other comprehensive income (loss) (cash flow hedge), on the balance sheet (fair value hedges and regulatory offsets), or recognized in earnings. We classify cash flows from the settlements of derivative instruments as operating activities on the Consolidated Statements of Cash Flows.

HEDGE 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 congestion revenue rights (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 also uses natural gas energy derivatives with the objective of managing price risk and lowering natural gas prices at its Mexican 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.

We summarize net energy derivative volumes at December 31, 2016 and 2015 as follows:

NET ENERGY DERIVATIVE VOLUMES			
<i>(Quantities in millions)</i>			
Commodity	Unit of measure	December 31,	
		2016	2015
California Utilities:			
SDG&E:			
Natural gas	MMBtu ⁽¹⁾	48	70
Electricity	MWh ⁽²⁾	4	1
Congestion revenue rights	MWh	48	36
SoCalGas – natural gas	MMBtu	1	1
Energy-Related Businesses:			
Sempra LNG & Midstream – natural gas	MMBtu	31	43

⁽¹⁾ Million British thermal units

⁽²⁾ Megawatt hours

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 other Sempra Energy subsidiaries and joint ventures, periodically enter into interest rate derivative

agreements intended to moderate our exposure to interest rates and to lower our overall costs of borrowing. We 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.

At December 31, 2016 and 2015, the net notional amounts of our interest rate derivatives, excluding joint ventures, were:

	INTEREST RATE DERIVATIVES			
	<i>(Dollars in millions)</i>			
	December 31, 2016		December 31, 2015	
	Notional debt	Maturities	Notional debt	Maturities
Sempra Energy Consolidated:				
Cash flow hedges ⁽¹⁾⁽²⁾	\$924	2017-2032	\$384	2016-2028
Fair value hedges	—	—	300	2016
SDG&E:				
Cash flow hedge ⁽¹⁾	305	2017-2019	315	2016-2019

⁽¹⁾ Includes Otay Mesa VIE. All of SDG&E's interest rate derivatives relate to Otay Mesa VIE.

⁽²⁾ At December 31, 2016, includes GdC, which was previously a joint venture and excluded from this table until we acquired the remaining 50-percent interest in September 2016.

FOREIGN CURRENCY DERIVATIVES

We utilize cross-currency swaps to hedge exposure related to Mexican peso-denominated debt at our Mexican subsidiaries and joint ventures. 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 joint ventures 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 joint ventures, 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. In January 2017, we entered into foreign currency derivatives with a notional amount totaling \$750 million.

In addition, Sempra South American Utilities and its joint ventures use foreign currency derivatives to manage foreign currency rate risk. We discuss these derivatives at Chilquinta Energía's Eletrans joint venture investment in Note 4.

At December 31, 2016 and 2015, the net notional amounts of our foreign currency derivatives, excluding joint ventures, were:

FOREIGN CURRENCY DERIVATIVES				
<i>(Dollars in millions)</i>				
	December 31, 2016		December 31, 2015	
	Notional amount	Maturities	Notional amount	Maturities
Sempra Energy Consolidated:				
Cross-currency swaps	\$408	2017-2023	\$408	2016-2023
Other foreign currency derivatives ⁽¹⁾	86	2017-2018	—	—

⁽¹⁾ At December 31, 2016, includes GdC, which was previously a joint venture and excluded from this table until we acquired the remaining 50-percent interest in September 2016.

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, 2016 and 2015, including the amount of cash collateral receivables that were not offset, as the cash collateral is in excess of liability positions.

DERIVATIVE INSTRUMENTS ON THE CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2016			
	Current assets: Fixed-price contracts and other derivatives ⁽¹⁾	Other assets: Sundry	Current liabilities: Fixed-price contracts and other derivatives ⁽²⁾	Deferred credits and other liabilities: Fixed-price contracts and other derivatives
Sempra Energy Consolidated:				
Derivatives designated as hedging instruments:				
Interest rate and foreign exchange instruments ⁽³⁾	\$ 7	\$ 2	\$ (24)	\$(228)
Commodity contracts not subject to rate recovery	—	—	(14)	—
Derivatives not designated as hedging instruments:				
Commodity contracts not subject to rate recovery	248	36	(254)	(28)
Associated offsetting commodity contracts	(242)	(27)	242	27
Associated offsetting cash collateral	—	(1)	16	1
Commodity contracts subject to rate recovery	37	73	(57)	(150)
Associated offsetting commodity contracts	(9)	(1)	9	1
Associated offsetting cash collateral	—	—	5	13
Net amounts presented on the balance sheet	41	82	(77)	(364)
Additional cash collateral for commodity contracts not subject to rate recovery	10	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	32	—	—	—
Total ⁽⁴⁾	\$ 83	\$ 82	\$ (77)	\$(364)
SDG&E:				
Derivatives designated as hedging instruments:				
Interest rate instruments ⁽³⁾	\$ —	\$ —	\$ (13)	\$ (12)
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	33	73	(51)	(150)
Associated offsetting commodity contracts	(6)	(1)	6	1
Associated offsetting cash collateral	—	—	3	13
Net amounts presented on the balance sheet	27	72	(55)	(148)
Additional cash collateral for commodity contracts not subject to rate recovery	1	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	30	—	—	—
Total ⁽⁴⁾	\$ 58	\$ 72	\$ (55)	\$(148)
SoCalGas:				
Derivatives not designated as hedging instruments:				
Commodity contracts subject to rate recovery	\$ 4	\$ —	\$ (6)	\$ —
Associated offsetting commodity contracts	(3)	—	3	—
Associated offsetting cash collateral	—	—	2	—
Net amounts presented on the balance sheet	1	—	(1)	—
Additional cash collateral for commodity contracts not subject to rate recovery	1	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	2	—	—	—
Total	\$ 4	\$ —	\$ (1)	\$ —

⁽¹⁾ Included in Current Assets: Other for SoCalGas.

⁽²⁾ Included in Current Liabilities: Other for SoCalGas.

⁽³⁾ Includes Otay Mesa VIE. All of SDG&E's amounts relate to Otay Mesa VIE.

⁽⁴⁾ Normal purchase contracts previously measured at fair value are excluded.

DERIVATIVE INSTRUMENTS ON THE CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31, 2015			
	Current assets: Fixed-price contracts and other derivatives ⁽¹⁾	Other assets: Sundry	Current liabilities: Fixed-price contracts and other derivatives ⁽²⁾	Deferred credits and other liabilities: Fixed-price contracts and other derivatives
Sempra Energy Consolidated:				
Derivatives designated as hedging instruments:				
Interest rate and foreign exchange instruments ⁽³⁾	\$ 4	\$ 1	\$ (15)	\$(156)
Commodity contracts not subject to rate recovery	13	—	—	—
Derivatives not designated as hedging instruments:				
Commodity contracts not subject to rate recovery	245	32	(239)	(21)
Associated offsetting commodity contracts	(232)	(20)	232	20
Associated offsetting cash collateral	(6)	—	4	—
Commodity contracts subject to rate recovery	28	49	(61)	(64)
Associated offsetting commodity contracts	(2)	(2)	2	2
Associated offsetting cash collateral	—	—	28	26
Net amounts presented on the balance sheet	50	60	(49)	(193)
Additional cash collateral for commodity contracts not subject to rate recovery	2	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	28	—	—	—
Total ⁽⁴⁾	\$ 80	\$ 60	\$ (49)	\$(193)
SDG&E:				
Derivatives designated as hedging instruments:				
Interest rate instruments ⁽³⁾	\$ —	\$ —	\$ (14)	\$ (23)
Derivatives not designated as hedging instruments:				
Commodity contracts not subject to rate recovery	—	—	(1)	—
Associated offsetting cash collateral	—	—	1	—
Commodity contracts subject to rate recovery	27	49	(60)	(64)
Associated offsetting commodity contracts	(2)	(2)	2	2
Associated offsetting cash collateral	—	—	28	26
Net amounts presented on the balance sheet	25	47	(44)	(59)
Additional cash collateral for commodity contracts not subject to rate recovery	1	—	—	—
Additional cash collateral for commodity contracts subject to rate recovery	27	—	—	—
Total ⁽⁴⁾	\$ 53	\$ 47	\$ (44)	\$ (59)
SoCalGas:				
Derivatives not designated as hedging instruments:				
Commodity contracts not subject to rate recovery	\$ —	\$ —	\$ (1)	\$ —
Associated offsetting cash collateral	—	—	1	—
Commodity contracts subject to rate recovery	1	—	(1)	—
Net amounts presented on the balance sheet	1	—	(1)	—
Additional cash collateral for commodity contracts subject to rate recovery	1	—	—	—
Total	\$ 2	\$ —	\$ (1)	\$ —

(1) Included in Current Assets: Other for SoCalGas.

(2) Included in Current Liabilities: Other for SoCalGas.

(3) Includes Otay Mesa VIE. All of SDG&E's amounts relate to Otay Mesa VIE.

(4) Normal purchase contracts previously measured at fair value are excluded.

The effects of derivative instruments designated as hedges on the Consolidated Statements of Operations and in OCI and AOCI for the years ended December 31 were:

FAIR VALUE HEDGE IMPACTS

(Dollars in millions)

		Pretax gain (loss) on derivatives recognized in earnings		
		Years ended December 31,		
		2016	2015	2014
Location				
Sempra Energy Consolidated:				
Interest rate instruments	Interest Expense	\$ 3	\$ 6	\$ 8
Interest rate instruments	Other Income, Net	(2)	(5)	(3)
Total ⁽¹⁾		\$ 1	\$ 1	\$ 5

⁽¹⁾ There was no hedge ineffectiveness in 2016 or 2015. There were gains of \$9 million from hedge ineffectiveness in 2014. All other changes in the fair value of the interest rate swap agreements are exactly offset by changes in the fair value of the underlying long-term debt and recorded in Other Income, Net.

CASH FLOW HEDGE IMPACTS

(Dollars in millions)

		Pretax (loss) gain recognized in OCI			Pretax (loss) gain reclassified from AOCI into earnings					
		Years ended December 31,			Years ended December 31,					
		2016	2015	2014	2016	2015	2014			
Location										
Sempra Energy Consolidated:										
Interest rate and foreign exchange instruments ⁽¹⁾		\$ (8)	\$ (18)	\$ (24)	Interest Expense	\$ (17)	\$ (18)	\$ (21)		
Interest rate instruments		—	—	3	Gain on Sale of Assets	—	—	3		
Interest rate instruments		(9)	(80)	(127)	Equity Earnings, Before Income Tax	(10)	(12)	(10)		
Interest rate and foreign exchange instruments		—	—	—	Remeasurement of Equity Method Investment	(7)	—	—		
Interest rate and foreign exchange instruments		5	(20)	—	Equity Earnings, Net of Income Tax	(5)	(13)	—		
Foreign exchange instruments		4	—	—	Revenues: Energy-Related Businesses	—	—	—		
Commodity contracts not subject to rate recovery		(13)	12	19	Revenues: Energy-Related Businesses	6	14	8		
Total ⁽²⁾		\$ (21)	\$ (106)	\$ (129)				\$ (33)	\$ (29)	\$ (20)
SDG&E:										
Interest rate instruments ⁽¹⁾⁽³⁾		\$ (2)	\$ (6)	\$ (9)	Interest Expense	\$ (12)	\$ (12)	\$ (11)		
SoCalGas:										
Interest rate instruments		\$ —	\$ —	\$ —	Interest Expense	\$ (1)	\$ (1)	\$ (1)		

⁽¹⁾ Amounts include Otay Mesa VIE. All of SDG&E's interest rate derivative activity relates to Otay Mesa VIE.

⁽²⁾ There was \$4 million, \$2 million and \$1 million of losses from ineffectiveness related to these cash flow hedges in 2016, 2015 and 2014, respectively.

⁽³⁾ There was negligible hedge ineffectiveness related to these cash flow hedges at SDG&E in 2016, 2015 and 2014.

For Sempra Energy Consolidated, we expect that losses of \$25 million, which are net of income tax benefit, that are currently recorded in AOCI (including \$12 million in noncontrolling interests, substantially all of which is related to Otay Mesa VIE at SDG&E) related to cash flow hedges will be reclassified into earnings during the next twelve months as the hedged items affect earnings. SoCalGas expects that negligible 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 twelve

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, 2016 is approximately 15 years and 2 years 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 19 years.

The effects of derivative instruments not designated as hedging instruments on the Consolidated Statements of Operations for the years ended December 31 were:

UNDESIGNATED DERIVATIVE IMPACTS

(Dollars in millions)

		Pretax (loss) gain on derivatives recognized in earnings		
		Years ended December 31,		
Location		2016	2015	2014
Sempra Energy Consolidated:				
Interest rate and foreign exchange instruments	Other Income, Net	\$ (32)	\$ (4)	\$(24)
Foreign exchange instruments	Equity Earnings, Net of Income Tax	3	(4)	(5)
Commodity contracts not subject to rate recovery	Revenues: Energy-Related Businesses	(18)	42	17
Commodity contracts not subject to rate recovery	Cost of Natural Gas, Electric Fuel and Purchased Power	—	—	3
Commodity contracts not subject to rate recovery	Operation and Maintenance	1	(1)	(4)
Commodity contracts subject to rate recovery	Cost of Electric Fuel and Purchased Power	(53)	(126)	(10)
Commodity contracts subject to rate recovery	Cost of Natural Gas	(4)	1	—
Total		\$(103)	\$ (92)	\$(23)
SDG&E:				
Commodity contracts not subject to rate recovery	Operation and Maintenance	\$ —	\$ —	\$ (1)
Commodity contracts subject to rate recovery	Cost of Electric Fuel and Purchased Power	(53)	(126)	(10)
Total		\$ (53)	\$(126)	\$(11)
SoCalGas:				
Commodity contracts not subject to rate recovery	Operation and Maintenance	\$ 1	\$ (1)	\$ (2)
Commodity contracts subject to rate recovery	Cost of Natural Gas	(4)	1	—
Total		\$ (3)	\$ —	\$ (2)

CONTINGENT FEATURES

For Sempra Energy Consolidated and SDG&E, 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, 2016 and 2015 is \$10 million and \$6 million, respectively. At December 31, 2016, if the credit ratings of Sempra Energy were reduced below investment grade, \$13 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 is negligible at December 31, 2016 and \$5 million at December 31, 2015. At December 31, 2016, if the credit ratings of SDG&E were

reduced below investment grade, \$3 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 10. 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, 2016 and 2015. 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 levels.

The fair value of commodity derivative assets and liabilities is presented in accordance with our netting policy, as we discuss in Note 9 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 at December 31, 2016 and 2015 in the tables below include the following:

- Nuclear decommissioning trusts reflect the assets of SDG&E’s nuclear decommissioning trusts, 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. Equity and certain debt 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 debt 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, 2016 and 2015.

There were no transfers into or out of Level 1, Level 2 or Level 3 for Sempra Energy Consolidated, SDG&E or SoCalGas during the periods presented.

RECURRING FAIR VALUE MEASURES – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Fair value at December 31, 2016				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Nuclear decommissioning trusts:					
Equity securities	\$508	\$ —	\$ —	\$ —	\$ 508
Debt securities:					
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies	36	16	—	—	52
Municipal bonds	—	206	—	—	206
Other securities	—	141	—	—	141
Total debt securities	36	363	—	—	399
Total nuclear decommissioning trusts ⁽²⁾	544	363	—	—	907
Interest rate and foreign exchange instruments	—	9	—	—	9
Commodity contracts not subject to rate recovery	—	15	—	9	24
Commodity contracts subject to rate recovery	1	3	96	32	132
Total	\$545	\$390	\$ 96	\$ 41	\$1,072
Liabilities:					
Interest rate and foreign exchange instruments	\$ —	\$252	\$ —	\$ —	\$ 252
Commodity contracts not subject to rate recovery	16	11	—	(17)	10
Commodity contracts subject to rate recovery	19	8	170	(18)	179
Total	\$ 35	\$271	\$170	\$(35)	\$ 441

	Fair value at December 31, 2015				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Nuclear decommissioning trusts:					
Equity securities	\$619	\$ —	\$ —	\$ —	\$ 619
Debt securities:					
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies	47	44	—	—	91
Municipal bonds	—	156	—	—	156
Other securities	—	182	—	—	182
Total debt securities	47	382	—	—	429
Total nuclear decommissioning trusts ⁽²⁾	666	382	—	—	1,048
Interest rate and foreign exchange instruments	—	5	—	—	5
Commodity contracts not subject to rate recovery	22	16	—	(4)	34
Commodity contracts subject to rate recovery	—	1	72	28	101
Total	\$688	\$404	\$ 72	\$ 24	\$1,188
Liabilities:					
Interest rate and foreign exchange instruments	\$ —	\$171	\$ —	\$ —	\$ 171
Commodity contracts not subject to rate recovery	5	3	—	(4)	4
Commodity contracts subject to rate recovery	—	68	53	(54)	67
Total	\$ 5	\$242	\$ 53	\$(58)	\$ 242

⁽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.

⁽²⁾ Excludes cash balances and cash equivalents.

RECURRING FAIR VALUE MEASURES – SDG&E

(Dollars in millions)

	Fair value at December 31, 2016				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Nuclear decommissioning trusts:					
Equity securities	\$508	\$ —	\$ —	\$ —	\$ 508
Debt securities:					
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies	36	16	—	—	52
Municipal bonds	—	206	—	—	206
Other securities	—	141	—	—	141
Total debt securities	36	363	—	—	399
Total nuclear decommissioning trusts ⁽²⁾	544	363	—	—	907
Commodity contracts not subject to rate recovery	—	—	—	1	1
Commodity contracts subject to rate recovery	1	2	96	30	129
Total	\$545	\$365	\$ 96	\$ 31	\$1,037
Liabilities:					
Interest rate instruments	\$ —	\$ 25	\$ —	\$ —	\$ 25
Commodity contracts subject to rate recovery	17	7	170	(16)	178
Total	\$ 17	\$ 32	\$170	\$(16)	\$ 203

	Fair value at December 31, 2015				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Nuclear decommissioning trusts:					
Equity securities	\$619	\$ —	\$ —	\$ —	\$ 619
Debt securities:					
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies	47	44	—	—	91
Municipal bonds	—	156	—	—	156
Other securities	—	182	—	—	182
Total debt securities	47	382	—	—	429
Total nuclear decommissioning trusts ⁽²⁾	666	382	—	—	1,048
Commodity contracts not subject to rate recovery	—	—	—	1	1
Commodity contracts subject to rate recovery	—	—	72	27	99
Total	\$666	\$382	\$ 72	\$ 28	\$1,148
Liabilities:					
Interest rate instruments	\$ —	\$ 37	\$ —	\$ —	\$ 37
Commodity contracts not subject to rate recovery	1	—	—	(1)	—
Commodity contracts subject to rate recovery	—	67	53	(54)	66
Total	\$ 1	\$104	\$ 53	\$(55)	\$ 103

⁽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.

⁽²⁾ Excludes cash balances and cash equivalents.

RECURRING FAIR VALUE MEASURES – SOCIALGAS

(Dollars in millions)

	Fair value at December 31, 2016				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Commodity contracts not subject to rate recovery	\$ —	\$ —	\$ —	\$ 1	\$ 1
Commodity contracts subject to rate recovery	—	1	—	2	3
Total	\$ —	\$ 1	\$ —	\$ 3	\$ 4
Liabilities:					
Commodity contracts subject to rate recovery	\$ 2	\$ 1	\$ —	\$(2)	\$ 1
Total	\$ 2	\$ 1	\$ —	\$(2)	\$ 1

	Fair value at December 31, 2015				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
Assets:					
Commodity contracts subject to rate recovery	\$ —	\$ 1	\$ —	\$ 1	\$ 2
Total	\$ —	\$ 1	\$ —	\$ 1	\$ 2
Liabilities:					
Commodity contracts not subject to rate recovery	\$ 1	\$ —	\$ —	\$(1)	\$ —
Commodity contracts subject to rate recovery	—	1	—	—	1
Total	\$ 1	\$ 1	\$ —	\$(1)	\$ 1

⁽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

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Balance at January 1	\$ 19	\$ 107	\$ 99
Realized and unrealized (losses) gains	(120)	(134)	15
Allocated transmission instruments	8	12	19
Settlements	19	34	(26)
Balance at December 31	\$ (74)	\$ 19	\$ 107
Change in unrealized (losses) gains relating to instruments still held at December 31	\$(101)	\$ (27)	\$ 8

SDG&E's Energy and Fuel Procurement department, in conjunction with SDG&E's finance group, is responsible for determining the appropriate fair value methodologies used to value and classify CRRs and long-term, fixed-price electricity positions on an ongoing basis. 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 remain in effect for the following year. 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. From January 1, 2016 to December 31, 2016, the auction prices ranged from \$(24) per MWh to \$10 per MWh at a given location, and from January 1, 2015 to December 31, 2015, the auction prices ranged from \$(16) per MWh to \$8 per MWh at a given location. 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 9.

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. At

December 31, 2016, these inputs range from \$17.40 per MWh to \$56.67 per MWh. 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 9.

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 also do not affect earnings.

Fair Value of Financial Instruments

The fair values of certain of our financial instruments (cash, temporary investments, accounts and notes receivable, short-term 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, 2016 and 2015:

FAIR VALUE OF FINANCIAL INSTRUMENTS

(Dollars in millions)

	December 31, 2016				
	Carrying amount	Fair Value			Total
		Level 1	Level 2	Level 3	
Sempra Energy Consolidated:					
Long-term amounts due from unconsolidated affiliates ⁽¹⁾	\$ 184	\$ —	\$ 91	\$ 84	\$ 175
Total long-term debt ⁽²⁾⁽³⁾	15,068	—	15,455	492	15,947
SDG&E:					
Total long-term debt ⁽³⁾⁽⁴⁾	\$ 4,654	\$ —	\$ 4,727	\$305	\$ 5,032
SoCalGas:					
Total long-term debt ⁽⁵⁾	\$ 3,009	\$ —	\$ 3,131	\$ —	\$ 3,131
	December 31, 2015				
	Carrying amount	Fair Value			Total
		Level 1	Level 2	Level 3	
Sempra Energy Consolidated:					
Long-term amounts due from unconsolidated affiliates ⁽¹⁾	\$ 175	\$ —	\$ 97	\$ 69	\$ 166
Total long-term debt ⁽²⁾⁽³⁾	13,761	—	13,985	648	14,633
SDG&E:					
Total long-term debt ⁽³⁾⁽⁴⁾	\$ 4,304	\$ —	\$ 4,355	\$315	\$ 4,670
SoCalGas:					
Total long-term debt ⁽⁵⁾	\$ 2,513	\$ —	\$ 2,621	\$ —	\$ 2,621

⁽¹⁾ Excluding accumulated interest outstanding of \$17 million and \$11 million at December 31, 2016 and 2015, respectively.

⁽²⁾ Before reductions for unamortized discount (net of premium) and debt issuance costs of \$109 million and \$107 million at December 31, 2016 and 2015, respectively, and excluding build-to-suit and capital lease obligations of \$383 million and \$387 million at December 31, 2016 and 2015, respectively. We discuss our long-term debt in Note 5.

⁽³⁾ Level 3 instruments include \$305 million and \$315 million at December 31, 2016 and 2015, respectively, related to Otay Mesa VIE.

⁽⁴⁾ Before reductions for unamortized discount and debt issuance costs of \$45 million and \$43 million at December 31, 2016 and 2015, respectively, and excluding capital lease obligations of \$240 million and \$244 million at December 31, 2016 and 2015, respectively.

⁽⁵⁾ Before reductions for unamortized discount and debt issuance costs of \$27 million and \$24 million at December 31, 2016 and 2015, respectively, and excluding capital lease obligations of \$1 million at December 31, 2015.

We determine the fair value of certain long-term amounts due from unconsolidated affiliates and long-term debt based on a market approach using quoted market prices for identical or similar securities in thinly-traded markets (Level 2). We value other long-term amounts due from unconsolidated affiliates of our South American utilities using a perpetuity approach based on the obligation's fixed interest rate, the absence of a stated maturity date and a discount rate reflecting local borrowing costs (Level 3). We value other long-term amounts due from unconsolidated affiliates and long-term debt using an income approach based on the present value of estimated future cash flows discounted at rates available for similar securities (Level 3).

We provide the fair values for the securities held in the nuclear decommissioning trust funds related to SONGS in Note 13.

Non-Recurring Fair Value Measures

Sempra Mexico

GdC. On September 26, 2016, IEnova completed the acquisition of PEMEX's 50-percent interest in GdC, increasing its ownership interest to 100 percent. As a result of IEnova obtaining control over GdC, 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 GdC (\$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 GdC 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 GdC acquisition in Note 3.

TdM. In February 2016, management approved a plan to market and sell its TdM natural gas-fired power plant, and it

was classified as held for sale on the Sempra Energy Consolidated Balance Sheet, as we discuss in Note 3. 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) for the year ended December 31, 2016 in Impairment Losses on the Sempra Energy Consolidated Statement of Operations. Market values resulting from a third party bidding process are considered to be Level 2 inputs in the fair value hierarchy.

Energía Sierra Juárez. In July 2014, Sempra Mexico completed the sale of a 50-percent interest in the 155-MW first phase of its Energía Sierra Juárez wind project to a wholly owned subsidiary of InterGen N.V. for cash proceeds of \$24 million, net of \$2 million cash sold, as discussed in Note 3. Upon deconsolidation, our equity method investment in Energía Sierra Juárez was measured at fair value, which resulted in a \$7 million after-tax gain attributable to a remeasurement of the retained investment to fair value. The fair value measurement was based on the cash sales price of \$26 million paid by InterGen N.V., a nonrelated party and market participant.

Sempra LNG & Midstream

Rockies Express. As we discuss in Note 3, 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, Before Income Tax, 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 following table summarizes significant inputs impacting our non-recurring fair value measures:

NON-RECURRING FAIR VALUE MEASURES – SEMPRA ENERGY CONSOLIDATED

(Dollars in millions)

	Estimated fair value	Valuation technique	Fair value hierarchy	% of fair value measurement	Inputs used to develop measurement	Range of inputs
Investment in GdC	\$1,144 ⁽¹⁾	Market approach	Level 2	100%	Equity sale price	100%
TdM	\$ 145 ⁽²⁾	Market approach	Level 2	100%	Purchase price offers	100%
Investment in Energía Sierra Juárez	\$ 26 ⁽³⁾	Market approach	Level 2	100%	Equity sale price	100%
Investment in Rockies Express	\$ 440 ⁽⁴⁾	Market approach	Level 2	100%	Equity sale price	100%

⁽¹⁾ At measurement date of September 26, 2016, immediately prior to acquiring a 100-percent ownership interest in GdC.

⁽²⁾ At measurement date of September 29, 2016. At December 31, 2016, TdM has a carrying value of \$154 million, reflecting subsequent operating activity, and is classified as held for sale.

⁽³⁾ At measurement date of July 16, 2014. At December 31, 2016, our investment in Energía Sierra Juárez had a carrying value of \$38 million, reflecting subsequent equity method activity to record distributions and earnings.

⁽⁴⁾ At measurement date of March 29, 2016. On May 9, 2016, Sempra LNG & Midstream sold its equity interest in Rockies Express.

NOTE 11. 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, 2016 and 2015, Sempra Energy and SDG&E have 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.

SoCalGas is authorized to issue up to 11 million shares of preferred stock. At December 31, 2016 and 2015, SoCalGas has the following preferred stock outstanding:

PREFERRED STOCK OUTSTANDING

(Dollars in millions, except per share amounts)

	December 31,	
	2016	2015
\$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' authorized preferred stock includes 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. 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 12. SEMPRA ENERGY – SHAREHOLDERS’ EQUITY AND EARNINGS PER SHARE

The following table provides EPS computations for the years ended December 31, 2016, 2015 and 2014. Basic EPS is calculated by dividing earnings attributable to common stock by the weighted-average number of 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 SHARE COMPUTATIONS AND DIVIDENDS DECLARED

(Dollars in millions, except per share amounts; shares in thousands)

	Years ended December 31,		
	2016	2015	2014
Numerator:			
Earnings/Income attributable to common shares	\$ 1,370	\$ 1,349	\$ 1,161
Denominator:			
Weighted-average common shares outstanding for basic EPS ⁽¹⁾	250,217	248,249	245,891
Dilutive effect of stock options, restricted stock awards and restricted stock units ⁽²⁾⁽³⁾	938	2,674	4,764
Weighted-average common shares outstanding for diluted EPS ⁽²⁾	251,155	250,923	250,655
Earnings per share:			
Basic	\$ 5.48	\$ 5.43	\$ 4.72
Diluted	\$ 5.46	\$ 5.37	\$ 4.63
Dividends declared per share of common stock ⁽⁴⁾	\$ 3.02	\$ 2.80	\$ 2.64

⁽¹⁾ Includes average fully vested RSUs held in our Deferred Compensation Plan of 568 in 2016, 491 in 2015 and 212 in 2014. 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⁾ Reflects the prospective adoption of ASU 2016-09 as of January 1, 2016. Prior to the adoption, the dilutive effect of stock options, RSAs and RSUs was reduced by excess tax benefits assumed to be used to repurchase shares on the open market.

⁽³⁾ Due to market fluctuations of both Sempra Energy stock and the comparative indices used to determine the vesting percentage of our total shareholder return performance-based RSUs, which we discuss in Note 8, dilutive RSUs may vary widely from period-to-period.

⁽⁴⁾ Our board of directors has the discretion to determine the payment and amount of future dividends.

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 zero, 722 and 4,087 RSUs for the years ended December 31, 2016, 2015 and 2014, respectively, because to include them would be antidilutive for the period. However, these RSUs could potentially dilute basic EPS in the future. There were no antidilutive stock options or RSAs for the years ended December 31, 2016, 2015 and 2014.

Prior to adoption of ASU 2016-09 as of January 1, 2016, which we discuss in Note 2, excess tax benefits were also assumed to be used to repurchase shares on the open market when applying the treasury stock method. The excess tax benefits are tax deductions we would receive upon the assumed exercise of stock options and assumed vesting of RSAs and RSUs in excess of the deferred income taxes we recorded related to the compensation expense on such stock options, awards and units. Tax shortfalls occur when the assumed tax deductions are less than recorded deferred income taxes. Upon adoption of ASU 2016-09, as a result of the provision to recognize excess tax benefits and shortfalls in earnings, these benefits and shortfalls are no longer included in the calculation of diluted EPS beginning January 1, 2016.

We are authorized to issue 750 million shares of no par value common stock. The following table provides common stock activity for the years ended December 31, 2016, 2015 and 2014.

COMMON STOCK ACTIVITY

	Years ended December 31,		
	2016	2015	2014
Common shares outstanding, January 1	248,298,080	246,330,884	244,461,327
Restricted stock units vesting ⁽¹⁾	1,363,555	1,499,062	989,027
Stock options exercised	167,742	227,815	699,783
Savings plan issuance	653,607	652,631	398,042
Common stock investment plan ⁽²⁾	266,056	249,665	205,203
Shares repurchased ⁽³⁾	(596,526)	(661,977)	(422,498)
Common shares outstanding, December 31	250,152,514	248,298,080	246,330,884

⁽¹⁾ Includes dividend equivalents.

⁽²⁾ Participants in the Direct Stock Purchase Plan may reinvest dividends to purchase newly issued shares.

⁽³⁾ From time to time, 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 13. SAN ONOFRE NUCLEAR GENERATING STATION (SONGS)

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, Southern California Edison Company (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 Nuclear Regulatory Commission (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 expenses and capital expenditures. 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

As part of the Steam Generator Replacement Project (SGRP), the steam generators were replaced in SONGS Units 2 and 3, and the Units returned to service in 2010 and 2011, respectively. Both Units were shut down in early 2012 after a water leak occurred in the Unit 3 steam generator. Edison concluded that the leak was due to unexpected wear from tube-to-tube contact. At the time the leak was identified, Edison also inspected and tested Unit 2 and subsequently found unexpected tube wear in Unit 2's steam generator. These issues with the steam generators ultimately resulted in Edison's decision to permanently retire SONGS.

The replacement steam generators were designed and provided by Mitsubishi Heavy Industries, Ltd., Mitsubishi

Nuclear Energy Systems, Inc., and Mitsubishi Heavy Industries America, Inc. (collectively MHI). In July 2013, SDG&E filed a lawsuit against MHI seeking to recover damages SDG&E has incurred and will incur related to the design defects in the steam generators. In October 2013, Edison instituted arbitration proceedings against MHI seeking damages as well. SDG&E is participating in the arbitration as a claimant and respondent. The arbitration hearing concluded in April 2016, and a decision could be reached in the first half of 2017. We discuss these proceedings in Note 15.

Settlement Agreement to Resolve the CPUC's Order Instituting Investigation (OII) into the SONGS Outage (SONGS OII)

In November 2012, in response to the 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 November 2014, the CPUC issued a final decision approving an Amended and Restated Settlement Agreement (Amended Settlement Agreement) in the SONGS OII proceeding executed by SDG&E along with Edison, The Utility Reform Network (TURN), the CPUC Office of Ratepayer Advocates (ORA) and two other intervenors who joined an earlier settlement agreement. The Amended Settlement Agreement does not affect ongoing or future proceedings before the NRC, or litigation or arbitration related to potential future recoveries from third parties (except for the allocation to ratepayers of any recoveries addressed in the final decision) or proceedings addressing decommissioning activities and costs.

The Amended Settlement Agreement provides for various disallowances, refunds and rate recoveries, including

authorizing SDG&E to recover in rates its remaining investment in SONGS, including base plant and construction work in progress, but excluding its investment in the SGRP, generally over a ten-year period commencing February 1, 2012, together with a return on investment at a reduced rate equal to:

- SDG&E's weighted average return on debt, plus
- 50 percent of SDG&E's weighted average return on preferred stock, as authorized in the CPUC's Cost of Capital (discussed in Note 14) proceeding then in effect (collectively, SONGS rate of return or SONGS ROR)

This has resulted in a SONGS ROR of 2.35 percent for the period from January 1, 2013 through December 31, 2016, which rate will remain in effect through 2017. The SONGS ROR for future periods will fluctuate based on SDG&E's authorized weighted average returns on debt and preferred stock in effect for those future periods.

In April 2015, a petition for modification was filed with the CPUC by Alliance for Nuclear Responsibility (A4NR), an intervenor in the SONGS OII proceeding, asking the CPUC to set aside its decision approving the Amended Settlement Agreement and reopen the SONGS OII proceeding. In June 2015, TURN, a party to the Amended Settlement Agreement, filed a response supporting the A4NR petition. TURN does not question the merits of the Amended Settlement Agreement, but is concerned that certain allegations regarding Edison raised by A4NR have undermined the public's confidence in the regulatory process.

In August 2015, ORA, also a party to the Amended Settlement Agreement, filed a petition for modification with the CPUC, withdrawing its support for the Amended Settlement Agreement and asking the CPUC to reopen the SONGS OII proceeding. The ORA does not question the merits of the Amended Settlement Agreement, but is concerned with the CPUC's approach toward disclosures concerning Edison *ex parte* communications with the CPUC.

In May 2016, the CPUC issued a ruling reopening the record of the OII to address the issue of whether the Amended Settlement Agreement is reasonable and in the public interest. In accordance with the ruling, Edison and SDG&E filed separate reports with the CPUC in June 2016 on the Amended Settlement Agreement and the status of its implementation, and filed separate legal briefs in July 2016 asserting that the Amended Settlement Agreement is reasonable and in the public interest.

In December 2016, the CPUC issued a procedural ruling 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. The ruling directs the parties to consider various issues, including the division between ratepayers and shareholders of any future MHI arbitration award. If no agreement is reached by April 28, 2017, the CPUC will consider other options including entertaining additional testimony, hearings and briefs.

There is no assurance that the Amended Settlement Agreement will not be renegotiated, modified or set aside as a result of these proceedings, which could result in a substantial reduction in our expected recovery and have a material adverse effect on Sempra Energy's and SDG&E's results of operations, financial condition and cash flows.

Accounting and Financial Impacts

Through December 31, 2016, the cumulative after-tax loss from plant closure recorded by Sempra Energy and SDG&E is \$125 million, including a reduction in the after-tax loss of \$13 million recorded in the first quarter of 2015 based on the CPUC's approval in March 2015 of SDG&E's compliance filing and establishment of the SONGS settlement revenue requirement, and a reduction in the after-tax loss of \$2 million based on a settlement with Nuclear Electric Insurance Limited in the fourth quarter of 2015, as we discuss below. In 2014, SDG&E recorded a \$21 million after-tax increase to the loss, including \$12 million based on a compliance filing regarding SDG&E's annual revenue requirement and the timing of refunds to ratepayers.

The remaining regulatory asset for the expected recovery of SONGS costs, consistent with the Amended Settlement Agreement, is \$183 million (\$31 million current and \$152 million long-term) at December 31, 2016. The amortization period prescribed for the regulatory asset is 10 years, which commenced in January 2015 following the CPUC's final decision approving the Amended Settlement Agreement in November 2014.

A decision in the MHI arbitration could be reached in the first half of 2017. Under the Amended Settlement Agreement, SDG&E's 20-percent share of any proceeds from the MHI arbitration, net of legal costs, must be equally divided between SDG&E shareholders and ratepayers. As we discuss above, there is no assurance that the Amended Settlement Agreement will not be modified as it pertains to the MHI arbitration proceedings by the ongoing CPUC OII proceeding. Accordingly, determination of the shareholder component of MHI arbitration proceeds, if any, may be suspended until resolution of the SONGS OII proceeding.

Settlement with Nuclear Electric Insurance Limited (NEIL)

As we discuss in Note 15, NEIL insures domestic and international nuclear utilities for the costs associated with

interruptions, damages, decontaminations and related nuclear risks. In October 2015, the SONGS co-owners (Edison, SDG&E and the City of Riverside) reached an agreement with NEIL to resolve all of SONGS' insurance claims arising out of the failures of the replacement steam generators for a total payment by NEIL of \$400 million, SDG&E's share of which was \$80 million. Pursuant to the terms of the SONGS OII Amended Settlement Agreement, after reimbursement of legal fees and a 5-percent allocation to shareholders, the net proceeds of \$75 million were allocated to ratepayers through the Energy Resource Recovery Account.

NRC Proceedings

In December 2013, Edison received a final NRC Inspection Report that identified a violation for the failure to verify the adequacy of the thermal-hydraulic and flow-induced vibration design of the Unit 3 replacement steam generator. In January 2014, Edison provided a response to the NRC Inspection Report stating that MHI, as contracted by Edison to prepare the SONGS replacement steam generator design, was the party responsible for validating the design of the steam generators.

In addition, the NRC issued an Inspection Report to MHI containing a Notice of Nonconformance for its flawed computer modeling in the design of the replacement steam generators.

Because SONGS has ceased operation, NRC inspection oversight of SONGS will now be continued through the NRC's Decommissioning Power Reactor Inspection Program to verify that decommissioning activities are being conducted safely, that spent fuel is safely stored onsite or transferred to another licensed location, and that the site operations and licensee termination activities conform to applicable regulatory requirements, licensee commitments and management controls.

Nuclear Decommissioning and Funding

As a result of Edison's decision to permanently retire SONGS Units 2 and 3, Edison has begun the decommissioning phase of the plant. The process of decommissioning a nuclear power plant is governed by the regulations of various governmental and other agencies, including but not limited to, those of the NRC, the U.S. Department of the Navy (the land owner) and the CPUC. The NRC regulations generally categorize the decommissioning activities into three phases: initial activities, major decommissioning and storage activities, and license termination. Initial activities include providing notice of permanent cessation of operations and notice of permanent removal of fuel from the reactor vessels, which were provided by Edison in 2013. Within two years after the cessation of operations, the licensee (Edison) must submit a post-shutdown decommissioning activities report, an

irradiated fuel management plan and a site-specific decommissioning cost estimate. Edison submitted each of these items to the NRC in September 2014.

In December 2016, Edison announced that, following a 10-month competitive bid process, it had contracted with a joint venture 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 20 percent of the total contract price.

In accordance with state and federal requirements and regulations, SDG&E has assets held in trusts, referred to as the Nuclear Decommissioning Trusts (NDT), to fund decommissioning costs for SONGS Units 1, 2 and 3. 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. At December 31, 2016, the fair value of SDG&E's NDT assets was \$1.0 billion. 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.

In April 2016, the CPUC adopted a decision approving a total decommissioning cost estimate for SONGS Units 2 and 3 of \$4.4 billion (in 2014 dollars), of which SDG&E's share is \$899 million. The decision also approves an annual advice letter request process for SDG&E to request trust fund disbursements for decommissioning costs based on a forecast for 2016 and thereafter. Disbursements from the trust will then be made up to this annual forecast amount as decommissioning expenses are incurred. To the extent actual expenses are consistent with forecasts, this arrangement will generally result in the utilization of nuclear decommissioning trust funds to support decommissioning, reducing the need to temporarily fund such costs with working capital. Certain spent fuel management costs, described below, continue to be temporarily funded with working capital. All disbursements will be subject to future refund until a reasonableness review of the actual decommissioning costs is conducted, which would be no less frequently than every three years.

SDG&E has received authorization from the CPUC to access trust funds for SONGS decommissioning costs of up to \$218 million for 2013 through 2016. The \$218 million includes \$37 million related to spent fuel management costs. In April 2016, Edison, acting for itself and on behalf of SDG&E, entered into a settlement agreement with the U.S. Department of Energy (DOE) to resolve the claims against the DOE related to the spent fuel management costs incurred through 2013. The settlement agreement sets forth an administrative procedure for the submission of claims for costs incurred from 2014 through 2016, which provides for

arbitration if the settlement process is unsuccessful. Edison, acting for itself and SDG&E, submitted claims for spent fuel management costs incurred during 2014 and 2015 in September 2016. Claims for spent fuel management costs incurred during 2016 must be submitted by September 30, 2017. SDG&E is not guaranteed recovery of its claims for 2014-2016; however, SDG&E anticipates that the claims for costs incurred in 2014 and 2015 will be resolved during 2017, and the claims for costs incurred in 2016 will be resolved during 2018.

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 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 working with outside counsel to clarify with the IRS some of the provisions in the proposed regulations so as to confirm that the proposed regulations will allow SDG&E to access the trust funds for reimbursement or payment of the spent fuel management costs that were or will be incurred in 2016 and subsequent years.

In December 2016, SDG&E filed an advice letter with the CPUC requesting authority to withdraw up to \$84 million for 2017 SONGS Units 2 and 3 costs (forecasted). The CPUC approved SDG&E’s request in February 2017, which allows SDG&E to withdraw from the funds as decommissioning costs are incurred.

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 Regulatory Liabilities Arising from Removal Obligations.

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 10.

NUCLEAR DECOMMISSIONING TRUSTS				
<i>(Dollars in millions)</i>				
	Cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
At December 31, 2016:				
Debt securities:				
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies ⁽¹⁾	\$ 52	\$ —	\$ —	\$ 52
Municipal bonds ⁽²⁾	203	4	(1)	206
Other securities ⁽³⁾	141	2	(2)	141
Total debt securities	396	6	(3)	399
Equity securities	143	366	(1)	508
Cash and cash equivalents	119	—	—	119
Total	\$658	\$372	\$ (4)	\$1,026
At December 31, 2015:				
Debt securities:				
Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies	\$ 89	\$ 2	\$ —	\$ 91
Municipal bonds	148	8	—	156
Other securities	194	1	(13)	182
Total debt securities	431	11	(13)	429
Equity securities	214	412	(7)	619
Cash and cash equivalents	15	—	—	15
Total	\$660	\$423	\$(20)	\$1,063

⁽¹⁾ Maturity dates are 2017-2047.

⁽²⁾ Maturity dates are 2017-2115.

⁽³⁾ Maturity dates are 2017-2111.

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 (Dollars in millions)	Years ended December 31,		
	2016	2015	2014
Proceeds from sales ⁽¹⁾	\$1,134	\$577	\$601
Gross realized gains	111	29	11
Gross realized losses	(29)	(15)	(11)

⁽¹⁾ Excludes securities that are held to maturity.

Net unrealized gains (losses) are included in Regulatory Liabilities Arising from Removal Obligations 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. In 2016, sale and purchase activities in our NDT increased significantly compared to prior years as a result of a change to our asset allocation to reduce our equity volatility, lower our duration risk, and increase exposure to municipal bonds and intermediate credit. This shift in our asset mix is intended to reduce the overall risk profile of the NDT, as we are in the decommissioning stage at the plant.

Asset Retirement Obligation and Spent Nuclear Fuel

SDG&E's asset retirement obligation related to decommissioning costs for the SONGS units was \$637 million at December 31, 2016. 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 asset retirement obligation at December 31, 2016 is based on a CPUC-approved cost study prepared in 2014 that reflects the acceleration of the start of decommissioning Units 2 and 3 as a result of the early closure of the plant. An updated cost study for Unit 1 is pending approval by the CPUC. SDG&E's share of total decommissioning costs in 2016 dollars is approximately \$989 million.

Spent nuclear fuel from SONGS is stored on-site in an Independent Spent Fuel Storage Installation (ISFSI) licensed by the NRC or temporarily in spent fuel pools. The ISFSI will be decommissioned after a spent fuel storage facility becomes available and the DOE removes the spent fuel from the site. Until then, SONGS owners are responsible for interim storage of spent nuclear fuel at SONGS.

NOTE 14. REGULATORY MATTERS

REGULATORY BALANCING ACCOUNTS

SDG&E and SoCalGas maintain regulatory balancing accounts. Over- and undercollected regulatory balancing accounts reflect the difference between customer billings and recorded or CPUC-authorized costs, including commodity costs. Amounts in the balancing accounts are recoverable (receivable) or refundable (payable) in future rates, subject to CPUC approval. Balancing account treatment eliminates the impact on earnings from variances in the covered costs from authorized amounts. Absent balancing account treatment, variations in the cost of fuel supply and certain operating and maintenance costs from amounts approved by the CPUC would increase volatility in utility earnings.

The following table summarizes our regulatory balancing accounts at December 31.

SUMMARY OF REGULATORY BALANCING ACCOUNTS AT DECEMBER 31 (Dollars in millions)	Sempra Energy Consolidated		SDG&E		SoCalGas	
	2016	2015	2016	2015	2016	2015
Current:						
Overcollected	\$(804)	\$ (789)	\$(301)	\$(345)	\$(503)	\$(444)
Undercollected	941	1,062	560	652	381	410
Net current receivable (payable) ⁽¹⁾	137	273	259	307	(122)	(34)
Noncurrent:						
Undercollected ⁽²⁾	85	215	—	—	85	215
Net noncurrent receivable (payable) ⁽¹⁾	85	215	—	—	85	215
Total net receivable (payable)	\$ 222	\$ 488	\$ 259	\$ 307	\$ (37)	\$ 181

⁽¹⁾ At both December 31, 2016 and 2015, the net receivable at SDG&E and the net payable at SoCalGas are shown separately on Sempra Energy's Consolidated Balance Sheets.

⁽²⁾ Long-term undercollected balance is included in Regulatory Assets (long-term) on Sempra Energy's Consolidated Balance Sheets and in Other Regulatory Assets (long-term) on SoCalGas' Consolidated Balance Sheets.

REGULATORY ASSETS AND LIABILITIES

We show the details of regulatory assets and liabilities in the following table, and discuss each of them separately below.

REGULATORY ASSETS (LIABILITIES)

(Dollars in millions)

	December 31,	
	2016	2015
SDG&E:		
Fixed-price contracts and other derivatives	\$ 141	\$ 99
Costs related to SONGS plant closure ⁽¹⁾	183	257
Costs related to wildfire litigation	353	362
Deferred taxes recoverable in rates	1,014	914
Pension and other postretirement benefit plan obligations	210	180
Removal obligations ⁽²⁾	(1,725)	(1,629)
Unamortized loss on reacquired debt	12	12
Environmental costs	48	16
Legacy meters ⁽¹⁾	16	32
Sunrise Powerlink fire mitigation	118	117
Other	(2)	9
Total SDG&E	368	369
SoCalGas:		
Pension and other postretirement benefit plan obligations	563	629
Employee benefit costs	45	51
Removal obligations ⁽²⁾	(972)	(1,145)
Deferred taxes recoverable in rates	417	330
Unamortized loss on reacquired debt	10	11
Environmental costs	22	22
Workers' compensation	10	13
Other	8	—
Total SoCalGas	103	(89)
Other Sempra Energy:		
Sempra LNG & Midstream	—	(7)
Sempra Mexico	71	33
Total Other Sempra Energy	71	26
Total Sempra Energy Consolidated	\$ 542	\$ 306

⁽¹⁾ Regulatory assets earning a rate of return.

⁽²⁾ Represents cumulative amounts collected in rates for future nonlegal asset removal costs.

NET REGULATORY ASSETS (LIABILITIES) AS PRESENTED ON THE CONSOLIDATED BALANCE SHEETS

(Dollars in millions)

	December 31,					
	2016			2015		
	Sempra Energy Consolidated	SDG&E	SoCalGas	Sempra Energy Consolidated	SDG&E	SoCalGas
Current regulatory assets ⁽¹⁾	\$ 89	\$ 81	\$ 8	\$ 115	\$ 107	\$ 7
Noncurrent regulatory assets ⁽²⁾	3,329	2,012	1,246	3,058	1,891	1,120
Current regulatory liabilities ⁽³⁾	—	—	—	(2)	—	—
Noncurrent regulatory liabilities ⁽⁴⁾	(2,876)	(1,725)	(1,151)	(2,865)	(1,629)	(1,216)
Total	\$ 542	\$ 368	\$ 103	\$ 306	\$ 369	\$ (89)

⁽¹⁾ At Sempra Energy Consolidated, included in Other Current Assets.

⁽²⁾ Excludes long-term undercollected balancing accounts at December 31, 2016 and 2015 of \$85 million and \$215 million, respectively, recorded at Sempra Energy Consolidated as Regulatory Assets (long-term) and at SoCalGas as Other Regulatory Assets (long-term).

⁽³⁾ Included in Other Current Liabilities.

⁽⁴⁾ At December 31, 2016 and 2015, \$179 million and \$72 million, respectively, at Sempra Energy Consolidated and \$179 million and \$71 million, respectively, at SoCalGas are included in Deferred Credits and Other.

In the tables 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.
- Regulatory assets arising from the SONGS plant closure are associated with SDG&E's investment in SONGS as of the plant closure date and the cost of operations since Units 2 and 3 were taken offline, as we discuss further in Note 13.
- Regulatory assets recorded to the Wildfire Expense Memorandum Account (WEMA) arising from CPUC-related costs for wildfire litigation are costs in excess of liability insurance coverage and amounts recovered from third parties, and are subject to CPUC review for reasonableness and assessment of SDG&E's prudence surrounding the settlement of claims in connection with the 2007 wildfires. We discuss the 2007 wildfires in Note 15 in "SDG&E – 2007 Wildfire Litigation."
- Deferred taxes recoverable in rates are based on current regulatory ratemaking and income tax laws. SDG&E, SoCalGas and Sempra Mexico expect to recover net regulatory assets related to deferred income taxes over the lives of the assets that give rise to the accumulated deferred income tax liabilities. 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.
- Regulatory assets related to unamortized losses on reacquired debt are recovered over the remaining amortization periods of the losses on reacquired debt. These periods range from 1 year to 11 years for SDG&E and from 5 years to 9 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 15.
- The regulatory asset related to the legacy meters removed from service and replaced under the Smart Meter Program is their undepreciated value. SDG&E is recovering this asset over a remaining 1-year period in rate base.

- 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 53-year period. We discuss the trust further in Note 15.
- 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.
- Amortization expense on regulatory assets for the years ended December 31, 2016, 2015 and 2014 was \$65 million, \$62 million and \$20 million, respectively, at Sempra Energy Consolidated, \$63 million, \$60 million and \$18 million, respectively, at SDG&E, and \$2 million in each year at SoCalGas.

CALIFORNIA UTILITIES MATTERS

CPUC General Rate Case (GRC)

The CPUC uses a general rate case proceeding to set sufficient rates to allow the California Utilities to recover their reasonable cost of operations and maintenance and to provide the opportunity to realize their authorized rates of return on their investment.

In November 2014, the California Utilities filed their 2016 General Rate Case (2016 GRC) applications to establish their authorized 2016 revenue requirements and the ratemaking mechanisms by which those requirements would change on an annual basis until the next general rate case proceeding.

In June 2016, the CPUC issued a final decision in the 2016 GRC. The final decision (2016 GRC FD) adopted a 2016 revenue requirement of \$2.204 billion for SoCalGas and \$1.791 billion for SDG&E. 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 also adopted subsequent annual escalation of the adopted revenue requirements by 3.5 percent for years 2017 and 2018 and continuation of the Z-Factor mechanism for qualifying cost recovery. The Z-Factor mechanism allows the California Utilities to seek cost recovery of significant cost increases, under certain unforeseen circumstances, incurred between GRC filings, subject to a \$5 million deductible per event. Also, the 2016 GRC FD denied a separate request for a four-year GRC period and instead adopted a three-year GRC period (through 2018).

The 2016 GRC FD is effective retroactive to January 1, 2016, and the California Utilities recorded the retroactive impacts in the second quarter of 2016. The adopted revenue

requirements associated with the seven-month period through July 2016 will be recovered in rates over a 17-month period, beginning August 2016 through December 2017. At December 31, 2016, balancing accounts related to the adoption of the revenue requirements were \$20 million and \$47 million, at SDG&E and SoCalGas, respectively.

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 reallocates the economic benefit of this tax deduction forecasting difference to ratepayers. Accordingly, revenues corresponding to income tax repair deductions that exceeded forecasted amounts relating to 2015, which have been tracked in memorandum accounts, are ordered to be refunded to customers. The 2015 estimated amounts in the memorandum accounts totaled \$72 million for SoCalGas and \$37 million for SDG&E. Pursuant to this refund requirement, SoCalGas and SDG&E recorded regulatory liabilities for these amounts, resulting in after-tax charges to earnings of \$43 million and \$22 million, respectively, in the second quarter of 2016 (summarized below). In addition, the 2016 GRC FD reduced rate base by \$38 million at SoCalGas and \$55 million at SDG&E. The corresponding reductions in the 2016 revenue requirement will be \$5 million at SoCalGas and \$7 million at SDG&E (which reductions are included in the adopted 2016 revenue requirement amounts described above). The rate base reductions reallocate to ratepayers the

economic benefits associated with tax repair deductions that were previously provided to the shareholders for the period of 2012-2014 for SoCalGas and 2011-2014 for SDG&E. The rate base reductions do not result in an impairment of any of our reported assets, but will impact our revenues and earnings prospectively.

The 2016 GRC FD also requires us to notify the CPUC if the 2012-2015 repairs deductions estimated in this GRC are different from the actual repairs deductions for SoCalGas and SDG&E. SoCalGas and SDG&E recorded regulatory liabilities of \$11 million and \$15 million, respectively, related to 2012-2014, resulting in after-tax charges to earnings for these differences of \$6 million and \$9 million in the second quarter of 2016 for SoCalGas and SDG&E, respectively (summarized below). In the third quarter of 2016, SoCalGas and SDG&E completed their 2015 calendar year tax returns, and final tax deductions associated with tax repair benefits to be refunded to ratepayers associated with the 2015 memo account were lower than the amounts estimated in 2015. Accordingly, the amounts to be refunded decreased by \$19 million for SoCalGas and \$5 million for SDG&E. In October 2016, SoCalGas and SDG&E filed a regulatory account update with the CPUC to reflect their final total 2015 repair allowance deductions of \$53 million and \$32 million, respectively. After recording the related income tax effect and corresponding regulatory revenue adjustments for income tax purposes, there was no net impact to earnings from the adjustments to the 2015 tax repairs deductions recorded in the third quarter of 2016. Accordingly, the earnings impacts in the table below are also the earnings impacts for the year ended December 31, 2016.

Following is a summary of immediate earnings impacts from the 2016 GRC FD:

EARNINGS IMPACTS FROM THE 2016 GRC FD

(Dollars in millions)

	SoCalGas		SDG&E	
	Pretax earnings (charge)	After-tax earnings (charge)	Pretax earnings (charge)	After-tax earnings (charge)
Adjustments to revenue related to tax repairs deductions:				
2015 memorandum account balance	\$(72)	\$(43)	\$(37)	\$(22)
True-up of 2012-2014 estimates to actuals	(11)	(6)	(15)	(9)
Total	\$(83)	\$(49)	\$(52)	\$(31)

Finally, the 2016 GRC FD requires the establishment of a two-way income tax expense memorandum account to track any revenue differences resulting from differences between the income tax expense forecasted in the GRC and the income tax expense incurred by the California Utilities from 2016 through 2018. The differences tracked are to specifically 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.

The account will remain open, and the balance in the account will be reviewed in subsequent GRC proceedings, until the CPUC decides to close the account. In July 2016, to address the implementation of the 2016 GRC FD, the California

Utilities filed an advice letter to establish a two-way memorandum account to track revenue requirement differences resulting from the differences in the income tax expense forecasted in the GRC proceedings of SoCalGas and SDG&E and the income tax expense incurred by them during the GRC period. Starting in the second quarter of 2016, SoCalGas and SDG&E are recording liabilities associated with tracking the differences in the income tax expense forecasted in the GRC proceedings and the income tax expense incurred, which for the year ended December 31, 2016 resulted in after-tax charges to earnings of \$16 million (\$27 million pretax) and \$3 million (\$5 million pretax), for SoCalGas and SDG&E, respectively.

CPUC Cost of Capital

A CPUC cost of capital proceeding determines a utility's authorized capital structure and authorized rate of return on rate base (ROR), which is a weighted average of the authorized returns on debt, preferred stock, and common equity (return on equity or ROE), weighted on a basis consistent with the authorized capital structure. The authorized ROR is the rate that the California Utilities are authorized to use in establishing rates to recover the cost of debt and equity used to finance their investment in CPUC-regulated electric distribution and generation as well as natural gas distribution, transmission and storage assets.

A cost of capital proceeding also addresses the automatic cost of capital adjustment mechanism (CCM), which applies market-based benchmarks to determine whether an

adjustment to the authorized ROR is required during the interim years between cost of capital proceedings. The market-based benchmark for SDG&E's and SoCalGas' CCM is the 12-month average monthly A-rated utility bond index, as published by Moody's for the 12-month period of October 1st through September 30th (CCM Period) of each calculation year. In the last cost of capital proceeding, SDG&E's and SoCalGas' CCM benchmark rate was set at 4.24 percent. If at the end of the CCM Period the monthly average benchmark rate falls outside of the established range of 3.24 percent to 5.24 percent, SDG&E's and SoCalGas' authorized ROE would be adjusted, upward or downward, by one-half of the difference between the 12-month average and the benchmark rate. In addition, the authorized recovery rate for SDG&E's and SoCalGas' cost of debt and preferred stock would be adjusted to their respective actual weighted average costs, with no change to the authorized capital structure. All three adjustments with the new rate would become effective on January 1st of the following year in which the benchmark range was exceeded. For the twelve-month period ended September 30, 2016, the 12-month average of monthly Moody's A-rated utility bond index was 4.01 percent, which is within the established range of 3.24 percent and 5.24 percent.

The CCM only applies during the intervening years between scheduled cost of capital proceedings. In the year the cost of capital proceeding is scheduled, the cost of capital proceeding takes precedence over the CCM and will set new rates for the following year.

SDG&E's current CPUC-authorized ROR is 7.79 percent and SoCalGas' current CPUC-authorized ROR is 8.02 percent based on their authorized capital structures as follows:

COST OF CAPITAL AND AUTHORIZED RATE STRUCTURE – CPUC						
SDG&E				SoCalGas		
Authorized weighting	Authorized rate of recovery	Weighted authorized ROR		Authorized weighting	Authorized rate of recovery	Weighted authorized ROR
45.25%	5.00%	2.26%	Long-Term Debt	45.60%	5.77%	2.63%
2.75%	6.22%	0.17%	Preferred Stock	2.40%	6.00%	0.14%
52.00%	10.30%	5.36%	Common Equity	52.00%	10.10%	5.25%
100.00%		7.79%		100.00%		8.02%

Under an agreement approved in 2016, the CPUC granted SDG&E and SoCalGas an extension of their cost of capital filing deadlines to April 2017 and extended the current CCM until the April 2017 filing date. However, in the event the adjustment mechanism is triggered, the utilities agreed that no changes to the current cost of capital would be made under the mechanism.

On February 7, 2017, SDG&E, SoCalGas, Pacific Gas and Electric Company (PG&E) and Edison (collectively, the Joint Investor-Owned Utilities or Joint IOUs), along with the

ORA and TURN, entered into a memorandum of understanding and filed a joint petition for modification (PFM) with the CPUC seeking a two-year extension for each of the Joint IOUs to file its next respective cost of capital application, extending the date to file the next cost of capital application from April 2017 to April 2019 for a 2020 test year. In addition to the two-year extension of the deadline to file the next cost of capital application, the memorandum of understanding contains provisions to reduce the ROE for SDG&E from 10.30 percent to 10.20 percent and for SoCalGas from 10.10 percent to 10.05 percent, effective

from January 1, 2018 through December 31, 2019. SDG&E's and SoCalGas' ratemaking capital structures will remain at the levels shown above until modified, if at all, by a future cost of capital decision by the CPUC. Also, the Joint IOUs will update their cost of capital for actual cost of long-term debt through August 2017 and forecasted cost through 2018, and update preferred stock costs for anticipated issuances (if any) through 2018. The CCM will be in effect to adjust 2019 cost of capital, if necessary. Unless changed by the operation of the CCM, the updated costs of long-term debt and preferred stock (if applicable) and new ROEs will remain in effect through December 31, 2019. The PFM is subject to final approval by the CPUC.

SDG&E MATTERS

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. The Electric Transmission Formula Rate (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 will make annual information filings on December 1 of a given year to update rates for the following calendar year. 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.

SDG&E's current estimated FERC ROR is 7.51 percent based on its capital structure as follows:

SDG&E COST OF CAPITAL AND RATE STRUCTURE – FERC			
	Weighting	Rate of recovery	Weighted ROR
Long-Term Debt	43.48%	4.21%	1.83%
Common Equity	56.52%	10.05%	5.68%
	100.00%		7.51%

In September 2015, the presiding judge assigned by the FERC to SDG&E's annual TO4 Formula Cycle 2 filing issued an initial decision and an order on summary judgment that authorized SDG&E to recover all of the costs incurred and allocated to SDG&E's FERC-regulated operations, including \$23 million of costs associated with the 2007 wildfires, discussed in Note 15. In October 2015, the CPUC filed a request for rehearing of the FERC's September 2015

order, which requested abeyance of SDG&E's request to recover 2007 wildfire damage expenses. In April 2016, the FERC affirmed its finding in the September 2015 order and denied the CPUC's request for rehearing. The FERC decision finalizes SDG&E's base transmission revenue requirement and the recovery of \$23 million of wildfire damage expenses allocated to SDG&E's FERC-regulated operations.

NOTE 15. 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 estimate with reasonable certainty 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, 2016, Sempra Energy's accrued liabilities for legal proceedings, including associated legal fees and costs of litigation, on a consolidated basis, were \$19 million. At December 31, 2016, accrued liabilities for legal proceedings were \$16 million for SDG&E and \$1 million for SoCalGas. Amounts for Sempra Energy and SoCalGas include \$1 million for matters related to the Aliso Canyon natural gas leak, which we discuss below. We discuss our policy regarding accrual of legal fees in Note 1.

SDG&E

2007 Wildfire Litigation

In October 2007, San Diego County experienced several catastrophic wildfires. Reports issued by the California Department of Forestry and Fire Protection (Cal Fire) concluded that two of these fires (the Witch and Rice fires) were SDG&E "power line caused" and that a third fire (the Guejito fire) occurred when a wire securing a Cox Communications' fiber optic cable came into contact with an SDG&E power line "causing an arc and starting the fire." A September 2008 staff report issued by the CPUC's Consumer Protection and Safety Division, now known as the Safety and Enforcement Division, reached substantially the same conclusions as the Cal Fire reports, but also contended that the power lines involved in the Witch and Rice fires and the lashing wire involved in the Guejito fire were not properly designed, constructed and maintained.

SDG&E has resolved almost all of the lawsuits associated with the three fires. Only two appeals remain pending after judgment in the trial court. SDG&E does not expect additional plaintiffs to file lawsuits given the applicable statutes of limitation, but could receive additional settlement demands and damage estimates from the remaining plaintiffs until the cases are resolved. SDG&E establishes reserves for the wildfire litigation as information becomes available and amounts are estimable.

SDG&E has concluded that it is probable that it will be permitted to recover in rates a substantial portion of the costs incurred to resolve wildfire claims in excess of its liability insurance coverage and the amounts recovered from third parties. Accordingly, at December 31, 2016, Sempra Energy and SDG&E have recorded assets of \$353 million in Other Regulatory Assets (long-term) on their Consolidated Balance Sheets (\$352 million related to CPUC-regulated operations and \$1 million related to FERC-regulated operations). In September 2015, SDG&E filed an application with the CPUC seeking authority to recover these costs in rates over a six- to ten-year period. The requested amount is the net estimated CPUC-related cost incurred by SDG&E after deductions for insurance reimbursement and third party settlement recoveries, and reflects a voluntary 10-percent shareholder contribution applied to the net WEMA balance. In April 2016, the CPUC issued a ruling establishing the scope and schedule for the proceeding, which will be managed in two phases. Phase 1 will address SDG&E's operational and management prudence surrounding the 2007 wildfires. Phase 2 will address whether SDG&E's actions and decision-making in connection with settling legal claims in relation to the wildfires were reasonable. Should SDG&E conclude that recovery in rates is no longer probable, SDG&E will record a charge against earnings at the time such conclusion is reached. If SDG&E had concluded that the recovery of regulatory assets related to CPUC-regulated operations was no longer probable or was less than currently estimated at December 31, 2016, the resulting after-tax charge against earnings would have been up to approximately \$208 million. A failure to obtain substantial or full recovery of these costs from customers, or any negative assessment of the likelihood of recovery, would likely have a material adverse effect on Sempra Energy's and SDG&E's results of operations and cash flows.

We discuss how we assess the probability of recovery of our regulatory assets in Note 1.

Lawsuit Against Mitsubishi Heavy Industries, Ltd.

As we discuss in Note 13, on July 18, 2013, SDG&E filed a lawsuit in the Superior Court of California in the County of San Diego against MHI. The lawsuit seeks to recover damages SDG&E has incurred and will incur related to the design defects in the steam generators MHI provided to the

SONGS nuclear power plant. The lawsuit asserts a number of causes of action, including fraud, based on the representations MHI made about its qualifications and ability to design generators free from defects of the kind that resulted in the permanent shutdown of the plant and further seeks to set aside the contractual limitation of damages that MHI has asserted. On July 24, 2013, MHI removed the lawsuit to the United States District Court for the Southern District of California and on August 8, 2013, MHI moved to stay the proceeding pending resolution of the dispute resolution process involving MHI and Edison arising from their contract for the purchase and sale of the steam generators. On October 16, 2013, Edison initiated an arbitration proceeding against MHI seeking damages stemming from the failure of the replacement steam generators. In late December 2013, MHI answered and filed a counterclaim against Edison. On March 14, 2014, MHI's motion to stay the United States District Court proceeding was granted with instructions that require the parties to allow SDG&E to participate in the ongoing Edison/MHI arbitration. As a result, SDG&E participated in the arbitration as a claimant and respondent. The arbitration hearing concluded at the end of April 2016. A decision could be reached in the first half of 2017.

Concluded Matters

Rim Rock Wind Farm. In 2011, the CPUC and FERC approved SDG&E's estimated \$285 million tax equity investment in a wind farm project and its purchase of renewable energy credits from that project. SDG&E's contractual obligations to both invest in the Rim Rock wind farm and to purchase renewable energy credits from the wind farm under the power purchase agreement were subject to the satisfaction of certain conditions which, if not achieved, would allow SDG&E to terminate the power purchase agreement and not make the investment.

In December 2013, SDG&E and the project developer began litigating claims against each other regarding whether the project developer had timely satisfied all contractual conditions necessary to trigger SDG&E's obligations to invest in the project and purchase renewable energy credits. On February 11, 2016, SDG&E, the project developer and several of the project developer's parent and affiliated entities entered into a settlement agreement, which was approved by the CPUC in July 2016 and all related lawsuits were dismissed. Under the settlement agreement, among other things, the parties agreed to terminate the tax equity investment arrangement, continue the power purchase agreement for the wind farm generation and release all claims against each other, while generally continuing the other elements of the 2011 approved decision. The settlement agreement resulted in a \$39 million credit to ratepayers.

Smart Meters Patent Infringement Lawsuit. In October 2011, SDG&E was sued by a Texas design and manufacturing company in Federal District Court, Southern District of California, and later transferred to the Federal District Court, Western District of Oklahoma as part of Multi-District Litigation proceedings, alleging that SDG&E's recently installed smart meters infringed certain patents. The meters were purchased from a third party vendor that has agreed to defend and indemnify SDG&E. The lawsuit sought injunctive relief and recovery of unspecified amounts of damages. The third party vendor has settled the lawsuit without cost to SDG&E, and a dismissal was entered in federal court on July 20, 2016.

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 facility has been operated by SoCalGas since 1972. SS25 is more than one mile away from and 1,200 feet above the closest homes. It is one of more than 100 injection-and-withdrawal wells at the storage facility.

Stopping the Leak, and Local Community Mitigation Efforts. SoCalGas worked closely with several of the world's leading experts to stop the leak, and on February 18, 2016, the California Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR) confirmed that the well was permanently sealed.

Pursuant to a stipulation and order by the Los Angeles County Superior Court (Superior Court), SoCalGas provided temporary relocation support to residents in the nearby community who requested it before the well was permanently sealed. Following the permanent sealing of the well and the completion of the Los Angeles County Department of Public Health's (DPH) indoor testing of certain homes in the Porter Ranch community, which concluded that indoor conditions did not present a long-term health risk and that it was safe for residents to return home, the Superior Court issued an order in May 2016, ruling that: (1) currently relocated residents be given the choice to request residence cleaning prior to returning home, with such cleaning to be performed according to the DPH's proposed protocol and at SoCalGas' expense, and (2) the relocation program for currently relocated residents would then terminate. SoCalGas completed the cleaning program, and the relocation program ended in July 2016.

Apart from the Superior Court order, in May 2016, the DPH also issued a directive that SoCalGas 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 have experienced symptoms from the natural gas 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 total 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), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Cost Estimates and Accounting Impact. As of December 31, 2016, SoCalGas recorded estimated costs of \$780 million related to the leak. Of this amount, approximately 70 percent is for the temporary relocation program (including cleaning costs and certain labor costs) and approximately 20 percent is for efforts to control the well, stop the leak, stop or reduce the emissions, and the estimated cost of the root cause analysis being conducted by an independent third party to determine the cause of the leak. The remaining portion of the \$780 million includes legal costs incurred to defend litigation, the value of lost gas, the costs to mitigate the actual natural gas released, and other costs. As the value of lost gas reflects the current replacement cost, the value may fluctuate until such time as replacement gas is purchased and injected into storage. SoCalGas adjusts its estimated total liability associated with the leak as additional information becomes available. The \$780 million represents management's best estimate of these costs related to the leak. Of these costs, a substantial portion has been paid and \$53 million is recorded as Reserve for Aliso Canyon Costs as of December 31, 2016 on SoCalGas' and Sempra Energy's Consolidated Balance Sheets for amounts expected to be paid after December 31, 2016.

As of December 31, 2016, we recorded the expected recovery of the costs described in the immediately preceding paragraph related to the leak of \$606 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 \$169 million of insurance proceeds we received in 2016 related to control of well expenses and temporary relocation costs. If we were to conclude that this receivable or a portion of it was no longer probable of recovery from insurers, some or all of this receivable would be charged against earnings, which would have a material adverse effect on SoCalGas' and Sempra Energy's financial condition, results of operations and cash flows.

The above amounts do not include any unsettled damage claims, restitution, or civil, administrative or criminal fines, costs or other penalties that may be imposed in connection with the incident or our responses thereto, as it is not possible to predict the outcome of any civil or criminal proceeding or any administrative action in which such damage awards, restitution or civil, administrative or criminal fines, costs or other penalties could be imposed, and any such amounts, if awarded or imposed, cannot be reasonably estimated at this time. In addition, the recorded amounts above do not include the costs to clean additional homes pursuant to the DPH 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.

In March 2016, the CPUC issued a decision directing SoCalGas to establish a memorandum account to prospectively track its authorized revenue requirement and all revenues that it receives for its normal, business-as-usual costs to own and operate the Aliso Canyon gas storage field. The CPUC will determine at a later time whether, and to what extent, the authorized revenues tracked in the memorandum account may be refunded to ratepayers. Pursuant to the CPUC's decision, SoCalGas filed an advice letter requesting to establish a memorandum account to track all normal, business-as-usual costs to own and operate the Aliso Canyon storage field. In September 2016, the advice letter was approved and made effective as of March 17, 2016, the date of the decision directing the company to establish the account.

Insurance. Excluding directors and officers liability insurance, we have four kinds of insurance policies that together 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. In reviewing each of our policies, and subject to various policy limits, exclusions and conditions, based upon 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 (including cleaning costs and certain labor costs), costs to address the leak and stop or reduce emissions, the root cause analysis being conducted to determine the cause of the leak, the value of lost natural gas, costs incurred to mitigate the actual natural gas released, costs associated with litigation and claims by nearby residents and businesses, the costs to clean additional homes pursuant to the DPH 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 control of well expenses and temporary relocation costs. 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 insurance coverage for these costs under the applicable policies, and to the extent we are not successful, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Our recorded estimate as of December 31, 2016 of \$780 million of certain costs in connection with the Aliso Canyon storage facility leak may rise significantly as more information becomes available, and any costs not included in our estimate could be material. To the extent not covered by insurance (including any costs in excess of applicable policy limits), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Governmental Investigations and Civil and Criminal Litigation. Various governmental agencies, including DOGGR, DPH, South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), Los Angeles Regional Water Quality Control Board, California Division of Occupational Safety and Health, CPUC, Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Environmental Protection Agency (EPA), Los Angeles County District Attorney's Office and California Attorney General's Office, have investigated or are investigating this incident. Other federal agencies (e.g., the DOE and the U.S. Department of the Interior) investigated the incident as part of the joint interagency task force discussed below. In January 2016, DOGGR and the CPUC selected Blade Energy Partners (Blade) to conduct an independent analysis under their supervision and to be funded by SoCalGas to investigate the technical root cause of the Aliso Canyon gas leak. The timing of the root cause analysis is under the control of Blade, the DOGGR and the CPUC.

As of February 27, 2017, 250 lawsuits, including over 14,000 plaintiffs, have been filed in the Los Angeles County Superior Court against SoCalGas, some of which have also named Sempra Energy. These various lawsuits assert causes of action for negligence, negligence per se, strict liability, property damage, fraud, public and private nuisance (continuing and permanent), trespass, inverse condemnation, fraudulent concealment, unfair business practices and loss of consortium, among other things, and additional litigation may be filed against us in the future related to this incident. A complaint alleging violations of Proposition 65 was also filed. Many of these complaints seek class action status, compensatory and punitive damages, civil penalties, injunctive relief, costs of future medical monitoring and attorneys' fees. All of these cases, other than a matter brought by the Los Angeles County District Attorney, the

federal securities class action and one of the federal shareholder derivative actions discussed below, are coordinated before a single court in the Los Angeles County Superior Court for pretrial management.

In addition to the lawsuits described above, a federal securities class action alleging violation of the federal securities laws has been filed against Sempra Energy and certain of its officers and directors in the United States District Court for the Southern District of California, and four shareholder derivative actions alleging breach of fiduciary duties have been filed against certain officers and directors of Sempra Energy and/or SoCalGas, one in the San Diego County Superior Court, one in the United States District Court for the Southern District of California, and two in the Los Angeles County Superior Court. In January 2017, the judge in the coordination proceeding in the Los Angeles County Superior Court granted a petition seeking to coordinate the shareholder derivative actions pending in state court into that proceeding.

Pursuant to the parties' agreement, the Los Angeles County Superior Court ordered that the individual and business entity plaintiffs (other than the Proposition 65 case, the federal securities class action and the one shareholder derivative action), would proceed by filing consolidated master complaints. Accordingly, in November 2016, the individuals and business entities asserting tort claims filed a First 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 and loss of consortium against SoCalGas, with certain causes also naming Sempra Energy. The consolidated complaint seeks compensatory and punitive damages for personal injuries, property damage and diminution in property value, a temporary injunction, costs of future medical monitoring, and attorneys' fees.

Also 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 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.

Three complaints have also been filed by public entities, as follows. These lawsuits are also included in the coordinated proceedings in the Los Angeles County Superior Court. First, the SCAQMD filed a complaint against SoCalGas seeking civil penalties for alleged violations of several nuisance-related statutory provisions arising from the leak and delays in stopping the leak. That suit seeks up to \$250,000 in civil penalties for each day the violations occurred. In July 2016, the SCAQMD amended its complaint to seek a declaration that SoCalGas is required to pay the costs of a longitudinal study of the health of persons exposed to the gas leak. In February 2017, SoCalGas and SCAQMD entered into a settlement agreement under which SoCalGas will pay \$8.5 million, \$1 million of which will be used to pay for a health study, and the SCAQMD will dismiss its complaint and will petition the SCAQMD Hearing Board to terminate the stipulated abatement order described below.

Second, 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 Los Angeles County 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 or formerly operated by SoCalGas in Los Angeles County require safety upgrades, including the installation of sub-surface safety shut-off valves 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.

Third, 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.

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. In September 2016, SoCalGas entered into a settlement agreement with the District Attorney's Office in which it 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 up to \$4 million in operational commitments, reimbursement and assessments in exchange for the District Attorney's Office moving to dismiss the remaining counts at sentencing and settling the complaint (collectively referred to as the District Attorney Settlement). In November 2016, SoCalGas completed the commitments and obligations under the District Attorney Settlement, and on November 29, 2016, the Court approved the settlement and entered judgment on the notice charge. Certain individuals residing near Aliso Canyon who objected to the settlement have filed a notice of appeal of the judgment, as well as a petition asking the Superior Court to set aside the November 29, 2016 order and grant them restitution.

The costs of defending against these civil and criminal lawsuits, cooperating with these investigations, and any damages, restitution, and civil, administrative and criminal fines, costs and other penalties, 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), or if there were to be significant delays in receiving insurance recoveries, such costs could have a material adverse effect on SoCalGas' and Sempra Energy's cash flows, financial condition and results of operations.

Regulatory Investigations. In February 2017, the CPUC opened a proceeding to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility while still maintaining reliability for the region. The order was issued pursuant to the provisions of Senate Bill (SB) 380. The proceeding will be conducted in two phases, with Phase 1 conducting an analysis of the feasibility of reducing or eliminating the use of Aliso Canyon and Phase 2 considering the potential implementation of the Phase 1 analysis. The Phase 1 schedule contemplates public participation hearings and workshops. The scope of the order expressly excludes issues with respect to air quality, public health, causation, culpability or cost responsibility regarding the Aliso Canyon gas leak.

Section 455.5 of the California Public Utilities Code, among other things, directs regulated utilities to notify the CPUC if any portion of a major facility has been out of service for nine consecutive months. Although SoCalGas does not believe the Aliso Canyon facility or any portion of that facility has been out of service for nine consecutive months, SoCalGas provided notification for transparency, and because the process for obtaining authorization to resume injection operations at the facility is taking longer to complete than initially contemplated. In response, and as required by Section 455.5, the CPUC issued a draft OII to address whether the Aliso Canyon facility or any portion of that facility has been out of service for nine consecutive months pursuant to Section 455.5, and if it is determined to have been out of service, whether the CPUC should adjust SoCalGas' rates to reflect the period the facility is deemed to have been out of service. If the CPUC adopts the order as drafted and as required under Section 455.5, hearings on the investigation will be consolidated with SoCalGas' next GRC proceeding.

Governmental Orders and Additional Regulation. In January 2016, the Governor of the State of California issued the Governor's Order proclaiming a state of emergency to exist in Los Angeles County due to the natural gas leak at the Aliso Canyon facility. The Governor's Order imposes various orders with respect to: stopping the leak; protecting public health and safety; ensuring accountability; and strengthening oversight. Most of the directives in the Governor's Order have been fulfilled, with the following remaining open items: (1) the prohibition against SoCalGas injecting any natural gas into the Aliso Canyon facility will continue until a comprehensive review, utilizing independent experts, of the safety of the storage wells is completed; (2) 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; (3) the CPUC must ensure that SoCalGas covers costs related to the natural gas leak and its response, while protecting ratepayers, and CARB was ordered to develop a program to fully mitigate the leak's emissions of methane by March 31, 2016, with such program to be funded by SoCalGas; and (4) DOGGR, CPUC, CARB and California Energy Commission (CEC) must submit to the Governor's Office a report that assesses the long-term viability of natural gas storage facilities in California.

In December 2015, SoCalGas made a commitment to mitigate the actual natural gas released from the leak and has been working on a plan to accomplish the mitigation. In March 2016, pursuant to the Governor's Order, the CARB issued its *Aliso Canyon Methane Leak Climate Impacts Mitigation Program*, which sets forth its recommended approach to achieve full mitigation of the emissions from the

Aliso Canyon natural gas leak. The CARB program requires that reductions in short-lived climate pollutants and other greenhouse gases be at least equivalent to the amount of the emissions from the leak, and that the appropriate global warming potential to be used in deriving the amount of reductions required is based on a 20-year term (rather than the 100-year term the CARB and other state and federal agencies use in regulating emissions), resulting in a target of approximately 9,000,000 metric tons of carbon dioxide equivalent. CARB's program also provides that all of the mitigation is to occur in California over the next five to ten years without the use of allowances or offsets. In October 2016, CARB issued its final report concluding that the incident resulted in total emissions from 90,350 to 108,950 metric tons of methane, and asserting that SoCalGas should mitigate 109,000 metric tons of methane to fully mitigate the greenhouse gas impacts of the leak. We have not agreed with CARB's estimate of methane released and continue to work with CARB on developing a mitigation plan.

In January 2016, the Hearing Board of the SCAQMD ordered SoCalGas to take various actions in connection with injecting and withdrawing natural gas at Aliso Canyon, sealing the well, monitoring, reporting, safety and funding a health impact study, among other things. SoCalGas has fulfilled its obligations under the Abatement Order to the satisfaction of the SCAQMD and its Hearing Board, except for the condition that SoCalGas agree to fund the reasonable costs of a study of the health impacts of the leak. SoCalGas tendered an offer to fund the reasonable costs of a health study and a proposed scope of work for the study, which SCAQMD rejected. As described above, SCAQMD amended its civil complaint against SoCalGas to seek a declaration that SoCalGas is required to pay the costs of a longitudinal study of the health of persons exposed to the gas leak. At a status report hearing in January 2017 regarding the progress of compliance with the health study condition, the Hearing Board modified the Abatement Order to retain jurisdiction over the matter until the later of September 30, 2017 and the satisfaction of the health study condition. Pursuant to the settlement agreement between SCAQMD and SoCalGas described above, the SCAQMD agrees that the health study condition has been satisfied and will petition the Hearing Board to terminate the Abatement Order.

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 issued new regulations following the Governor's Order as described above, 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, have been or may be scheduled, additional legislation has been

proposed in the California Legislature, and additional laws, orders, rules and regulations may be adopted. The Los Angeles County Board of Supervisors has formed a task force to review and potentially implement new, more stringent land use (zoning) requirements and associated regulations and enforcement protocols for oil and gas activities, including natural gas storage field operations, which could materially affect new or modified uses of the Aliso Canyon and other natural gas storage fields located in the County.

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, 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.

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. Aliso Canyon, 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 completed its measurement of the natural gas lost from the leak and 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. SoCalGas has not injected natural gas into Aliso Canyon since October 25, 2015, pursuant to orders by DOGGR and the governor, and SB 380. Limited withdrawals of natural gas from Aliso Canyon have been made in 2017 to augment gas supplies during critical demand periods. In November 2016, SoCalGas submitted a request to DOGGR seeking authorization to resume injection operations at the Aliso Canyon storage facility. In accordance with SB 380, DOGGR held public meetings in the affected community to provide the public an opportunity to comment on the safety review findings, and the comment period has expired. It remains for DOGGR to issue its safety determination after which, the CPUC must concur with DOGGR's safety determination, before injections at the facility can resume.

If the Aliso Canyon facility were to be taken out of service for any meaningful period of time, it could result in an impairment of the facility, significantly higher than expected operating costs and/or additional capital expenditures, and natural gas reliability and electric generation could be jeopardized. At December 31, 2016, the Aliso Canyon facility has a net book value of \$531 million, including \$217 million of construction work in progress for the project to construct a new compression station. 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.

Concluded Matter

SoCalGas, along with Monsanto Co., Solutia, Inc., Pharmacia Corp. and Pfizer, Inc., were defendants in seven Los Angeles County Superior Court lawsuits filed beginning in April 2011 seeking recovery of unspecified amounts of damages, including punitive damages, as a result of plaintiffs' exposure to PCBs (polychlorinated biphenyls). The lawsuits alleged plaintiffs were exposed to PCBs not only through the food chain and other various sources but from PCB-contaminated natural gas pipelines owned and operated by SoCalGas. This contamination allegedly caused plaintiffs to develop cancer and other serious illnesses. Plaintiffs asserted various bases for recovery, including negligence and products liability. As of February 2017, SoCalGas has settled all of the seven lawsuits for an amount that is not significant.

Sempra Mexico

Permit Challenges and Property Disputes

Sempra Mexico has been engaged in a long-running land dispute relating to property adjacent to its Energía Costa Azul LNG terminal near Ensenada, Mexico. Ownership of the adjacent property is not required by any of the environmental or other regulatory permits issued for the operation of the terminal. A claimant to the adjacent property has nonetheless asserted that his health and safety are endangered by the operation of the facility, and in February 2011, filed an action in the Federal Court challenging the permits. In September 2016, the Federal Court dismissed the lawsuit in which the permits were challenged.

The claimant also filed complaints in the federal Agrarian Court challenging the refusal of the Secretaría de la Reforma Agraria (now the Secretaría de Desarrollo Agrario, Territorial y Urbano, or SEDATU) in 2006 to issue a title to him for the disputed property. In November 2013, the 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. Sempra Mexico expects additional proceedings regarding the claims, although such proceedings are not related to the permit challenges referenced above.

The property claimant also filed a lawsuit in July 2010 against Sempra Energy in Federal District Court in San Diego seeking compensatory and punitive damages as well as the earnings from the Energía Costa Azul LNG terminal based on his allegations that he was wrongfully evicted from the adjacent property and that he has been harmed by other allegedly improper actions. In September 2015, the Court granted Sempra Energy's motion for summary judgment and closed the case. The claimant has appealed the summary judgment and an earlier order dismissing certain of his causes of action. Argument on the appeal is scheduled for March 2017.

Additionally, 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 Energía Costa Azul 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.

Two real property cases have been filed against Energía Costa Azul. In one, the plaintiffs seek to annul the recorded property title for a parcel on which the Energía Costa Azul LNG terminal is situated and to obtain possession of a different parcel that allegedly sits in the same place. A second complaint was served in April 2013 seeking to invalidate the contract by which Energía Costa Azul purchased another of the terminal parcels, on the grounds the purchase price was unfair. In January 2016, the second complaint was dismissed by the Federal Agrarian Court. Sempra Mexico expects further proceedings on these two matters.

In 2015, the Yaqui tribe, with the exception of the BÁCUM community, granted its consent and a right-of-way easement agreement for the construction of the Guaymas-El Oro segment of IEnova's Sonora natural gas pipeline that crosses its territory. Representatives of the BÁCUM community filed an amparo claim in Mexican Federal Court demanding the right to withhold consent for the project, the stoppage of work in the Yaqui territory and damages. The judge granted a suspension order that prohibited the construction through the BÁCUM community territory only. As a result, IEnova was delayed in the construction of the approximately 14 kilometers of pipeline that pass through territory of the Yaqui tribe. The CFE has agreed to extend the deadline for commercial operations until late April 2017. Later-appointed BÁCUM authorities have requested that the Mexican Federal Court dismiss the amparo claim. In the meantime, the portion of the pipeline crossing the BÁCUM territory has been completed.

In December 2012, Backcountry Against Dumps, Donna Tisdale and the Protect Our Communities Foundation filed a complaint in the United States District Court for the Southern District of California seeking to invalidate the presidential permit issued by the DOE for Energía Sierra Juárez's cross-border generation tie line (Gen-tie line) connecting the Energía Sierra Juárez wind project in Mexico to the electric grid in the United States. The suit alleged violations of the National Environmental Policy Act (NEPA), the Endangered Species Act, the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Plaintiffs filed a motion for summary judgment, which the court largely denied in September 2015. One NEPA claim, however, was not resolved – whether the Environmental Impact Statement's (EIS) assessment of alleged extraterritorial impacts of the Gen-tie line in the United States on the environment in Mexico was inadequate (the "extraterritorial impact issue") – and was the subject of additional briefing in 2016. On January 30, 2017, the Court issued a ruling on the extraterritorial impact issue and, contrary to its prior ruling, ruled that the EIS was deficient for not considering the effects in Mexico of both the U.S. and Mexican portion of the Gen-tie line and the wind farm itself. The Court has not yet made a decision on the ultimate remedy, and a final judgment has not been entered.

Sempra LNG & Midstream

Beginning in April 2012, a series of lawsuits were filed against Mobile Gas in Mobile County Circuit Court alleging that in the first half of 2008 Mobile Gas spilled tert-butyl mercaptan, an odorant added to natural gas for safety reasons, in Eight Mile, Alabama. Under the terms of the agreement to sell the outstanding equity of EnergySouth, the parent company of Mobile Gas, as discussed in Note 3, this litigation and any associated liabilities and insurance receivable were retained by Mobile Gas at the close of the transaction in September 2016.

Other Litigation

Sempra Energy holds a noncontrolling interest in RBS Sempra Commodities, a limited liability partnership in the process of being liquidated. RBS, our partner in the joint venture, paid an £86 million assessment in October 2014 to the United Kingdom's Revenue and Customs Department (HMRC) for denied value-added tax (VAT) refund claims filed in connection with the purchase of carbon credit allowances by RBS Sempra Energy Europe (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. The First-Tier Tribunal held a preliminary hearing in September 2016 to determine whether HMRC's assessment was time-barred. On January 20, 2017, the Tribunal issued a decision in favor of HMRC concluding that the assessment was not time-barred. RBS may appeal the First-Tier Tribunal's decision to the Upper Tribunal. If RBS does not appeal the decision, there will be a hearing on the substantive matter regarding whether RBS knew or should have known that certain vendors in the trading chain did not remit their VAT to HMRC.

During 2015, liquidators, acting on behalf of ten companies (the Companies) that engaged in carbon credit trading via chains that included a company that RBS SEE traded with directly, filed a claim in the High Court of Justice asserting damages of £146 million against RBS and Mercuria Energy Europe Trading Limited (the Defendants). The claim alleges that the Defendants' participation in the purchase and sale of carbon credits resulted in the Companies' carbon credit trading transactions creating a VAT liability they were unable to pay. 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 us.

Our remaining balance in RBS Sempra Commodities is accounted for under the equity method. The investment balance of \$67 million at December 31, 2016 reflects remaining distributions expected to be received from the partnership as it is liquidated. The timing and amount of distributions may be impacted by these matters. We discuss RBS Sempra Commodities further in Note 4.

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 represents 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.

At December 31, 2016, the future minimum payments under existing natural gas contracts and natural gas storage and transportation contracts were

FUTURE MINIMUM PAYMENTS – SEMPRA ENERGY CONSOLIDATED			
<i>(Dollars in millions)</i>			
	Storage and transportation	Natural gas ⁽¹⁾	Total ⁽¹⁾
2017	\$240	\$148	\$ 388
2018	213	84	297
2019	138	1	139
2020	42	—	42
2021	42	—	42
Thereafter	144	—	144
Total minimum payments	\$819	\$233	\$1,052

⁽¹⁾ Excludes amounts related to LNG purchase agreements discussed below.

FUTURE MINIMUM PAYMENTS – SOCALGAS			
<i>(Dollars in millions)</i>			
	Transportation	Natural gas	Total
2017	\$123	\$16	\$139
2018	104	1	105
2019	52	1	53
2020	23	—	23
2021	23	—	23
Thereafter	82	—	82
Total minimum payments	\$407	\$18	\$425

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

PAYMENTS UNDER NATURAL GAS CONTRACTS			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated	\$1,169	\$1,200	\$1,984
SoCalGas	966	975	1,735

LNG Purchase Agreement

Sempra LNG & Midstream has a purchase agreement for the supply of LNG to the Energía Costa Azul terminal. The agreement is priced using a predetermined formula based on forward prices of the index applicable from 2017 to 2028 and an estimated one percent escalation in 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, 2016, 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>	
2017	\$ 446
2018	459
2019	416
2020	423
2021	434
Thereafter	4,004
Total	\$6,182

Actual LNG purchases in 2016, 2015 and 2014 have been significantly lower than the maximum amount required under the agreement due to the customer electing to divert most cargoes as allowed by the agreement.

Purchased-Power Contracts

For 2017, SDG&E expects to meet its customer power requirements from the following resource types:

- Long-term contracts: 40 percent (of which 35 percent is provided by renewable energy contracts expiring on various dates through 2041)
- Other SDG&E-owned generation and tolling contracts (including OMEC): 45 percent
- Spot market purchases: 15 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.

In July 2016, the Ministry of Energy and Mines in Peru amended the basis upon which tolling fees are billed for transmission connection from the generator to the distributor. Prior to the change in law, tolling fees were based on contracted capacity. As a result of the change in law, tolling fees are now based on coincident peak demand, resulting in a variable contractual commitment.

At December 31, 2016, the fixed and determinable estimated future minimum payments under long-term purchased-power contracts were

FUTURE MINIMUM PAYMENTS – PURCHASED-POWER CONTRACTS		
<i>(Dollars in millions)</i>		
	Sempra Energy Consolidated	SDG&E
2017	\$ 666	\$ 563
2018	672	556
2019	664	546
2020	606	487
2021	608	487
Thereafter	6,205	5,865
Total minimum payments⁽¹⁾	\$9,421	\$8,504

⁽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.

Payments on these contracts represent capacity charges and minimum energy and transmission purchases that exceed the minimum commitment. SDG&E, Chilquinta Energía 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

PAYMENTS UNDER PURCHASED-POWER CONTRACTS			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated	\$1,667	\$1,573	\$1,574
SDG&E	752	715	710

Operating Leases

Sempra Energy Consolidated, SDG&E and SoCalGas have operating leases on real and personal property expiring at various dates from 2017 through 2054. 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 an operating lease agreement for future acquisitions of fleet vehicles with an aggregate maximum lease limit of \$150 million, \$125 million of which has been utilized as of December 31, 2016.

Rent expense for operating leases is as follows:

RENT EXPENSE – OPERATING LEASES			
<i>(Dollars in millions)</i>			
	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated	\$77	\$78	\$78
SDG&E	28	27	26
SoCalGas	38	39	38

At December 31, 2016, the minimum rental commitments payable in future years under all noncancelable operating leases were

FUTURE MINIMUM PAYMENTS – OPERATING LEASES			
<i>(Dollars in millions)</i>			
	Sempra Energy Consolidated	SDG&E	SoCalGas
2017	\$ 78	\$ 27	\$ 42
2018	69	23	38
2019	61	22	32
2020	54	20	27
2021	49	19	25
Thereafter	306	71	134
Total future minimum rental commitments	\$617	\$182	\$298

Capital Leases

Power Purchase Agreements

SDG&E has four power purchase agreements with peaker plant facilities, one of which went into commercial operation in 2015. All four are accounted for as capital leases. At December 31, 2016, capital lease obligations for these leases, three with a 25-year term and one with a 9-year term, were valued at \$239 million.

In 2015, SDG&E entered into a CPUC-approved 25-year power purchase agreement with a peaker plant facility that is currently under construction. Beginning with the initial delivery of the contracted power, scheduled in June 2017, the power purchase agreement will be accounted for as a capital lease.

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, 2016, 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 were

FUTURE MINIMUM PAYMENTS – POWER PURCHASE AGREEMENTS	
<i>(Dollars in millions)</i>	
2017	\$ 77
2018	104
2019	104
2020	104
2021	104
Thereafter	1,806
Total minimum lease payments ⁽¹⁾	2,299
Less: estimated executory costs	(517)
Less: interest ⁽²⁾	(1,043)
Present value of net minimum lease payments ⁽³⁾	\$ 739

⁽¹⁾ This amount will be 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. This expense will receive ratemaking treatment consistent with purchased-power costs, which are recovered in rates.

⁽²⁾ Amount necessary to reduce net minimum lease payments to present value at the inception of the leases.

⁽³⁾ Includes \$8 million in Current Portion of Long-Term Debt and \$231 million in Long-Term Debt on Sempra Energy's and SDG&E's Consolidated Balance Sheets at December 31, 2016. Of the present value of net minimum lease payments, \$500 million will be recorded as a capital lease obligation when construction of the peaker plant facility is completed and delivery of contracted power commences, which is scheduled to occur in June 2017.

The annual amortization charge for the power purchase agreements was \$4 million in 2016, \$4 million in 2015 and \$3 million in 2014.

In January 2017, SDG&E entered into a CPUC-approved 20-year power purchase agreement with a 500-MW intermediate stage power plant facility to be constructed. Upon commercial operation, scheduled in 2018, the power purchase agreement will be accounted for as a capital lease.

Headquarters Build-to-Suit Lease

Sempra Energy has a 25-year, build-to-suit lease for its San Diego, California, headquarters completed in 2015. We began occupying the building in the second half of 2015, concurrent with the termination of the prior headquarters lease. 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.

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 \$137 million at December 31, 2016.

At December 31, 2016, the future minimum lease payments on the lease are as follows:

FUTURE MINIMUM PAYMENTS – BUILD-TO-SUIT LEASE	
<i>(Dollars in millions)</i>	
2017	\$ 10
2018	10
2019	10
2020	11
2021	11
Thereafter	245
Total minimum lease payments	\$297

Other Capital Leases

Sempra South American Utilities entered into capital lease agreements for fleet vehicles and other assets in 2015. At December 31, 2016, the future minimum lease payments under these capital leases for Sempra Energy Consolidated were \$2 million in 2017, \$2 million in 2018, \$1 million in 2019, negligible in 2020 and 2021 and \$8 million thereafter. The net present value of the minimum lease payments is \$6 million at December 31, 2016.

The annual depreciation charge for the fleet vehicles and other assets in 2016, 2015 and 2014 was \$2 million, \$4 million and \$4 million, respectively, at Sempra Energy Consolidated, including \$1 million, \$2 million and \$2 million, respectively, at SDG&E and \$1 million, \$2 million and \$2 million, respectively, at SoCalGas.

Construction and Development Projects

Sempra Energy Consolidated has various capital projects in progress in the United States, Mexico and South America. Sempra Energy's total commitments under these projects are approximately \$827 million, requiring future payments of \$398 million in 2017, \$73 million in 2018, \$44 million in 2019, \$39 million in 2020, \$28 million in 2021 and \$245 million thereafter. The following is a summary by segment of contractual commitments and contingencies related to such projects.

SDG&E

At December 31, 2016, SDG&E has commitments to make future payments of \$143 million for construction projects that include

- \$80 million for infrastructure improvements for natural gas and electric transmission and distribution operations;
- \$49 million for the engineering, material procurement and construction costs primarily associated with the San Luis Rey Synchronous Condenser and Bay Boulevard Substation relocation projects; and
- \$14 million related to spent fuel management at SONGS.

SDG&E expects future payments under these contractual commitments to be \$59 million in 2017, \$44 million in 2018, \$17 million in 2019, \$12 million in 2020, \$3 million in 2021 and \$8 million thereafter.

SoCalGas

At December 31, 2016, SoCalGas has commitments to make future payments of \$13 million for contracts related to the procurement of gas rotary meters. SoCalGas expects the future payments under these contractual commitments to approximate \$3 million each year in 2017 through 2019 and \$4 million in 2020.

Sempra South American Utilities

At December 31, 2016, Sempra South American Utilities has commitments to make future payments of \$21 million for the construction of substations and related transmission lines. The future payments under these contractual commitments are all expected to be made in 2017.

Sempra Mexico

At December 31, 2016, Sempra Mexico has commitments to make future payments of \$470 million for contracts related to the construction of various natural gas pipelines and ongoing maintenance services. Sempra Mexico expects future payments under these contractual commitments to be \$135 million in 2017, \$26 million in 2018, \$24 million in 2019, \$23 million in 2020, \$25 million in 2021 and \$237 million thereafter.

Sempra Renewables

At December 31, 2016, Sempra Renewables has commitments to make future payments of \$166 million for contracts related to the construction of renewable energy projects. The future payments under these contractual commitments are all expected to be made in 2017.

Sempra LNG & Midstream

At December 31, 2016, Sempra LNG & Midstream has commitments to make future payments of \$14 million primarily for natural gas transportation projects. The future

payments under these contractual commitments are all expected to be made in 2017.

OTHER COMMITMENTS

SDG&E

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 are expected to be approximately \$3 million per year, subject to escalation of 2 percent per year, for a remaining 53-year period. At December 31, 2016, the present value of these future payments of \$118 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, and the related liability was \$118 million.

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 million cubic feet per day of regasified LNG from Sempra Mexico's Energía Costa Azul 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 Potentially Responsible Party (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:

	Years ended December 31,		
	2016	2015	2014
Sempra Energy Consolidated ⁽¹⁾	\$53	\$64	\$45
SDG&E	17	24	23
SoCalGas	35	39	21

⁽¹⁾ In cases of non-wholly owned affiliates, includes only our share.

We have not identified any significant environmental issues outside the United States.

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, 2016:

	Manufactured-gas sites	Waste disposal sites (PRP) ⁽¹⁾	Former fossil-fueled power plants	Total ⁽²⁾
SDG&E ⁽³⁾	\$—	\$1	\$ 1	\$ 2
SoCalGas ⁽⁴⁾	23	2	—	25
Other	—	1	—	1
Total Sempra Energy	\$23	\$4	\$ 1	\$28

⁽¹⁾ Sites for which we have been identified as a Potentially Responsible Party.

⁽²⁾ Includes \$8 million, \$1 million and \$7 million classified as current liabilities, and \$20 million, \$1 million and \$18 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 mitigation.

⁽⁴⁾ Does not include SoCalGas' liability for environmental matters for the natural gas leak at the Aliso Canyon facility. We discuss matters related to the leak above in "Legal Proceedings – SoCalGas – Aliso Canyon Natural Gas Storage Facility Gas Leak."

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 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, 2016, 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 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 California Coastal Commission (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 13, does not reduce SDG&E's mitigation obligation. SDG&E's share of the estimated mitigation costs is \$89 million, of which \$43 million has been incurred through December 31, 2016, and \$46 million is accrued for remaining costs through 2050, which is recoverable in rates and included in Deferred Credits and Other Liabilities 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. SDG&E's share of the reef expansion costs currently forecasted through 2020 is \$7 million. A decision in the proceeding is expected by the end of 2017.

NUCLEAR INSURANCE

SDG&E and the other owners of SONGS have insurance to cover claims from nuclear liability incidents arising at SONGS. This insurance provides \$375 million in coverage limits, the maximum amount available, including coverage for acts of terrorism. In addition, the Price-Anderson Act provides for up to \$13 billion of secondary financial protection (SFP). If a nuclear liability loss occurring at any U.S. licensed/commercial reactor exceeds the \$375 million insurance limit, all nuclear reactor owners could be required to contribute to the SFP. SDG&E's contribution would be up to \$50.93 million. This amount is subject to an annual maximum of \$7.6 million, unless a default occurs by any other SONGS owner. If the SFP is insufficient to cover the liability loss, SDG&E could be subject to an additional assessment.

The SONGS owners, including SDG&E, also have \$2.75 billion of nuclear property, decontamination, and debris removal insurance, subject to a \$2.5 million deductible for "each and every loss." This insurance coverage is provided through Nuclear Electric Insurance Limited (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. See Note 13 in "Settlement with NEIL" for discussion of an agreement between the SONGS co-owners and NEIL to settle all claims under the NEIL policies associated with the SONGS outage.

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). The industry aggregate loss limit for property claims arising from non-certified acts of terrorism is \$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.

U.S. DEPARTMENT OF ENERGY NUCLEAR FUEL DISPOSAL

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 will lead to 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 January 1, 2006 through December 31, 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 operation and maintenance cost balancing account.

In September 2016, Edison filed claims with the DOE for \$56 million in spent fuel management costs incurred in 2014 and 2015 on behalf of the SONGS co-owners under the terms of the 2016 spent fuel settlement agreement. SDG&E's respective share of the claim is \$11 million. It is unclear whether the claim will be resolved through settlement or arbitration, when resolution is expected, and whether Edison will receive an award for the full claim amount.

In October 2015, the CCC approved Edison's application for the proposed expansion of an ISFSI at SONGS. The ISFSI expansion began construction in 2016, will be fully loaded with spent fuel by 2019, and will 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.

CONCENTRATION OF CREDIT RISK

We maintain credit policies and systems 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.

As they become operational, projects owned or partially owned by Sempra LNG & Midstream, Sempra Renewables, Sempra South American Utilities and Sempra Mexico 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.

NOTE 16. SEGMENT INFORMATION

We have six 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 South American Utilities* develops, owns and operates, or holds interests in, electric transmission, distribution and generation infrastructure in Chile and Peru.
- *Sempra Mexico* develops, owns and operates, or holds interests in, natural gas transmission systems and an

ethane system, a liquid petroleum gas pipeline and associated storage terminal, a natural gas distribution utility, electric generation facilities (including wind and solar electric generation facilities and a natural gas-fired power plant), a terminal for the import of LNG, and marketing operations for the purchase of LNG and the purchase and sale of natural gas in Mexico. In February 2016, management approved a plan to market and sell the TdM natural gas fired power plant located in Mexicali, Baja California, as we discuss in Note 3.

- *Sempra Renewables* develops, owns and operates, or holds interests in, wind and solar energy generation facilities serving wholesale electricity markets in the United States.
- *Sempra LNG & Midstream* develops, owns and operates, or holds interests in, natural gas pipelines and storage facilities and a terminal for the import and export of LNG and sale of natural gas, all within the United States. In September 2016, Sempra LNG & Midstream sold EnergySouth, the parent company of Mobile Gas and Willmut Gas, and in May 2016, sold its 25-percent interest in Rockies Express. Sempra LNG & Midstream also owned and operated the Mesquite Power plant, a natural gas-fired electric generation asset, the remaining 625-MW block of which was sold in April 2015. We discuss these divestitures in Note 3.

We evaluate each segment's performance based on its contribution to Sempra Energy's reported earnings. 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.

Common services shared by the business segments are 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 4. Amounts labeled as “All other” in the following tables consist primarily of parent organizations.

SEGMENT INFORMATION

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
REVENUES			
SDG&E	\$ 4,253	\$ 4,219	\$ 4,329
SoCalGas	3,471	3,489	3,855
Sempra South American Utilities	1,556	1,544	1,534
Sempra Mexico	725	669	818
Sempra Renewables	34	36	35
Sempra LNG & Midstream	508	653	979
Adjustments and eliminations	—	(2)	(3)
Intersegment revenues ⁽¹⁾	(364)	(377)	(512)
Total	\$10,183	\$10,231	\$11,035
INTEREST EXPENSE			
SDG&E	\$ 195	\$ 204	\$ 202
SoCalGas	97	84	69
Sempra South American Utilities	38	32	33
Sempra Mexico	13	23	17
Sempra Renewables	4	3	5
Sempra LNG & Midstream	43	72	111
All other	282	263	241
Intercompany eliminations	(119)	(120)	(124)
Total	\$ 553	\$ 561	\$ 554
INTEREST INCOME			
SoCalGas	\$ 1	\$ 4	\$ —
Sempra South American Utilities	21	19	14
Sempra Mexico	6	7	4
Sempra Renewables	5	4	1
Sempra LNG & Midstream	71	75	115
All other	—	—	1
Intercompany eliminations	(78)	(80)	(113)
Total	\$ 26	\$ 29	\$ 22
DEPRECIATION AND AMORTIZATION			
SDG&E	\$ 646	\$ 604	\$ 530
SoCalGas	476	461	431
Sempra South American Utilities	49	50	55
Sempra Mexico	77	70	64
Sempra Renewables	6	6	5
Sempra LNG & Midstream	47	49	61
All other	11	10	10
Total	\$ 1,312	\$ 1,250	\$ 1,156
INCOME TAX EXPENSE (BENEFIT)			
SDG&E	\$ 280	\$ 284	\$ 270
SoCalGas	143	138	139
Sempra South American Utilities	80	67	58
Sempra Mexico	188	11	5
Sempra Renewables	(38)	(49)	(44)
Sempra LNG & Midstream	(80)	28	(20)
All other	(184)	(138)	(108)
Total	\$ 389	\$ 341	\$ 300

SEGMENT INFORMATION (CONTINUED)
(Dollars in millions)

	Years ended December 31 or at December 31,		
	2016	2015	2014
EARNINGS (LOSSES)			
SDG&E	\$ 570	\$ 587	\$ 507
SoCalGas ⁽²⁾	349	419	332
Sempra South American Utilities	156	175	172
Sempra Mexico	463	213	192
Sempra Renewables	55	63	81
Sempra LNG & Midstream	(107)	44	50
All other	(116)	(152)	(173)
Total	\$ 1,370	\$ 1,349	\$ 1,161
ASSETS			
SDG&E	\$17,719	\$16,515	\$16,260
SoCalGas	13,424	12,104	10,446
Sempra South American Utilities	3,591	3,235	3,379
Sempra Mexico	7,542	3,783	3,486
Sempra Renewables	3,644	1,441	1,334
Sempra LNG & Midstream	5,564	5,566	6,435
All other	475	734	872
Intersegment receivables	(4,173)	(2,228)	(2,561)
Total	\$47,786	\$41,150	\$39,651
EXPENDITURES FOR PROPERTY, PLANT & EQUIPMENT			
SDG&E	\$ 1,399	\$ 1,133	\$ 1,100
SoCalGas	1,319	1,352	1,104
Sempra South American Utilities	194	154	174
Sempra Mexico	330	302	325
Sempra Renewables	835	81	190
Sempra LNG & Midstream	117	87	212
All other	20	47	18
Total	\$ 4,214	\$ 3,156	\$ 3,123
GEOGRAPHIC INFORMATION			
Long-lived assets ⁽³⁾ :			
United States	\$28,351	\$26,132	\$24,183
Mexico	4,814	3,160	2,821
South America	1,863	1,652	1,746
Total	\$35,028	\$30,944	\$28,750
Revenues ⁽⁴⁾ :			
United States	\$ 8,004	\$ 8,119	\$ 8,774
South America	1,556	1,544	1,534
Mexico	623	568	727
Total	\$10,183	\$10,231	\$11,035

⁽¹⁾ Revenues for reportable segments include intersegment revenues of \$6 million, \$76 million, \$102 million, and \$180 million for 2016, \$9 million, \$75 million, \$101 million and \$192 million for 2015, and \$10 million, \$69 million, \$91 million and \$342 million for 2014 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 17. QUARTERLY FINANCIAL DATA (UNAUDITED)

We provide quarterly financial information for Sempra Energy Consolidated, SDG&E and SoCalGas below:

SEMPRA ENERGY				
<i>(In millions, except per share amounts)</i>				
	Quarters ended			
	March 31	June 30	September 30	December 31
2016⁽¹⁾:				
Revenues	\$2,622	\$2,156	\$2,535	\$2,870
Expenses and other income	\$2,167	\$2,268	\$1,553	\$2,365
Net income	\$ 364	\$ 27	\$ 719	\$ 409
Earnings attributable to Sempra Energy	\$ 353	\$ 16	\$ 622	\$ 379
Basic per-share amounts ⁽²⁾ :				
Net income	\$ 1.46	\$ 0.11	\$ 2.87	\$ 1.63
Earnings attributable to Sempra Energy	\$ 1.41	\$ 0.06	\$ 2.48	\$ 1.51
Weighted-average common shares outstanding	249.7	250.1	250.4	250.6
Diluted per-share amounts ⁽²⁾ :				
Net income	\$ 1.45	\$ 0.11	\$ 2.85	\$ 1.62
Earnings attributable to Sempra Energy	\$ 1.40	\$ 0.06	\$ 2.46	\$ 1.51
Weighted-average common shares outstanding	251.5	252.0	252.4	251.6
2015:				
Revenues	\$2,682	\$2,367	\$2,481	\$2,701
Expenses and other income	\$2,076	\$1,971	\$2,211	\$2,269
Net income	\$ 458	\$ 320	\$ 282	\$ 388
Earnings attributable to Sempra Energy	\$ 437	\$ 295	\$ 248	\$ 369
Basic per-share amounts ⁽²⁾ :				
Net income	\$ 1.85	\$ 1.29	\$ 1.14	\$ 1.56
Earnings attributable to Sempra Energy	\$ 1.76	\$ 1.19	\$ 1.00	\$ 1.48
Weighted-average common shares outstanding	247.7	248.1	248.4	248.7
Diluted per-share amounts ⁽²⁾ :				
Net income	\$ 1.83	\$ 1.27	\$ 1.12	\$ 1.54
Earnings attributable to Sempra Energy	\$ 1.74	\$ 1.17	\$ 0.99	\$ 1.47
Weighted-average common shares outstanding	251.2	251.5	251.0	251.5

⁽¹⁾ Reflects the prospective adoption of ASU 2016-09 effective January 1, 2016, as we discuss in Note 2.

⁽²⁾ Earnings per share are computed independently for each of the quarters and therefore may not sum to the total for the year.

In September 2016, Sempra Mexico recorded a \$617 million noncash gain (\$432 million after-tax; \$350 million after-tax and noncontrolling interests) associated with the remeasurement of its equity interest in GdC, which we discuss in Note 3.

In September 2016, Sempra Mexico recognized an impairment charge of \$131 million (\$111 million after-tax; \$90 million after-tax and noncontrolling interests) related to assets held for sale at TdM, which we discuss in Notes 3 and 10.

In May 2016, Sempra LNG & Midstream recorded a pretax charge of \$206 million (\$123 million after-tax) related to permanently released pipeline capacity with Rockies Express and others, which we discuss in Note 15.

In March 2016, Sempra LNG & Midstream recognized an impairment charge of \$44 million (\$27 million after-tax) on its investment in Rockies Express, which we discuss in Notes 3 and 10.

SDG&E*(Dollars in millions)*

	Quarters ended			
	March 31	June 30	September 30	December 31
2016⁽¹⁾:				
Operating revenues	\$991	\$992	\$1,209	\$1,061
Operating expenses	755	822	886	800
Operating income	\$236	\$170	\$ 323	\$ 261
Net income	\$137	\$ 87	\$ 194	\$ 147
(Earnings) losses attributable to noncontrolling interest	(1)	13	(11)	4
Earnings attributable to common shares	\$136	\$100	\$ 183	\$ 151
2015:				
Operating revenues	\$966	\$972	\$1,230	\$1,051
Operating expenses	684	745	930	802
Operating income	\$282	\$227	\$ 300	\$ 249
Net income	\$151	\$130	\$ 182	\$ 143
(Earnings) losses attributable to noncontrolling interest	(4)	(4)	(12)	1
Earnings attributable to common shares	\$147	\$126	\$ 170	\$ 144

⁽¹⁾ Reflects the prospective adoption of ASU 2016-09 effective January 1, 2016, as we discuss in Note 2.**SOCALGAS***(Dollars in millions)*

	Quarters ended			
	March 31	June 30	September 30	December 31
2016⁽¹⁾:				
Operating revenues	\$1,033	\$617	\$686	\$1,135
Operating expenses	739	628	648	899
Operating income (loss)	\$ 294	\$ (11)	\$ 38	\$ 236
Net income	\$ 199	\$ —	\$ —	\$ 151
Dividends on preferred stock	—	(1)	—	—
Earnings (losses) attributable to common shares	\$ 199	\$ (1)	\$ —	\$ 151
2015:				
Operating revenues	\$1,048	\$780	\$620	\$1,041
Operating expenses	728	686	633	834
Operating income (loss)	\$ 320	\$ 94	\$ (13)	\$ 207
Net income (loss)	\$ 214	\$ 71	\$ (8)	\$ 143
Dividends on preferred stock	—	(1)	—	—
Earnings (losses) attributable to common shares	\$ 214	\$ 70	\$ (8)	\$ 143

⁽¹⁾ Reflects the prospective adoption of ASU 2016-09 effective January 1, 2016, as 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,

substantially all of SoCalGas' annual earnings are recognized in the first and fourth quarters each year.

GLOSSARY

2016 GRC	2016 General Rate Case	DOGGR	California Department of Conservation's Division of Oil, Gas, and Geothermal Resources
2016 GRC FD	2016 General Rate Case Final Decision		
A4NR	Alliance for Nuclear Responsibility	DPH	Los Angeles County Department of Public Health
AB	Assembly Bill		
AFUDC	Allowance for funds used during construction	Ecogas	Ecogas México, S. de R.L. de C.V.
AOCI	Accumulated other comprehensive income (loss)	Edison	Southern California Edison Company
API	American Petroleum Institute	EIR	Environmental impact report
ARO	Asset retirement obligation	EIS	Environmental Impact Statement
ASU	Accounting Standards Update	Eletrans	Eletrans, collectively for Eletrans S.A. and Eletrans II S.A.
Bay Gas	Bay Gas Storage Company Ltd.	EMA	Energy Management Agreement
Bcf	Billion cubic feet	EnergySouth	EnergySouth Inc.
Blade	Blade Energy Partners	Enova	Enova Corporation
BMV	La Bolsa Mexicana de Valores, S.A.B. de C.V. (Mexican Stock Exchange)	EPA	U.S. Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection	EPC	Engineering, procurement and construction
California Utilities	San Diego Gas & Electric Company and Southern California Gas Company	EPS	Earnings per common share
Cameron LNG JV	Cameron LNG Holdings, LLC	ERRA	Energy Resource Recovery Account
CARB	California Air Resources Board	EV	Electric vehicle
CCA	Community Choice Aggregation	FERC	Federal Energy Regulatory Commission
CCC	California Coastal Commission	FTA	Free Trade Agreement
CCM	Cost of capital adjustment mechanism	Gazprom	Gazprom Marketing & Trading Mexico
CEC	California Energy Commission	GCIM	Gas Cost Incentive Mechanism
CENAGAS	Centro Nacional de Control de Gas	GdC	Gasoductos de Chihuahua S. de R.L. de C.V.
CFCA	Core fixed cost account	GHG	Greenhouse gas
CFE	Comisión Federal de Electricidad (Federal Electricity Commission) (Mexico)	GRC	General Rate Case
CFTC	U.S. Commodity Futures Trading Commission	HLBV	Hypothetical liquidation at book value
Chilquinta Energía	Chilquinta Energía S.A. and its subsidiaries	HMRC	United Kingdom's Revenue and Customs Department
CLF	Chilean Unidad de Fomento	IEnova	Infraestructura Energética Nova, S.A.B. de C.V.
CNE	Comisión Nacional de Energía (National Energy Commission) (Chile)	IMG	Infraestructura Marina del Golfo
CNF	Cleveland National Forest	IOU	Investor-owned utility
Con Edison Development	Consolidated Edison Development	IRS	Internal Revenue Service
CPCN	Certificate of Public Convenience and Necessity	ISFSI	Independent spent fuel storage installation
CPI	Consumer Price Index	ISO	California Independent System Operator, also known as CAISO
CPUC	California Public Utilities Commission	JBIC	Japan Bank for International Cooperation
CRE	Comisión Reguladora de Energía (Energy Regulatory Commission) (Mexico)	Joint IOUs	Joint investor-owned utilities
CRRs	Congestion revenue rights	JP Morgan	J.P. Morgan Chase & Co.
DEN	Ductos y Energéticos del Norte, S. de R.L. de C.V.	kV	Kilovolt
DOE	U.S. Department of Energy	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

GLOSSARY (CONTINUED)

MHI	Mitsubishi Heavy Industries, Ltd., Mitsubishi Nuclear Energy Systems, Inc., and Mitsubishi Heavy Industries America, Inc.	RBS SEE	RBS Sempra Energy Europe
Mississippi Hub	Mississippi Hub, LLC	RBS Sempra Commodities	RBS Sempra Commodities LLP
MMBtu	Million British thermal units (of natural gas)	RECs	Renewable energy certificates
MMcf	Million cubic feet	REX	Rockies Express pipeline
Mobile Gas	Mobile Gas Service Corporation	Rockies Express	Rockies Express Pipeline LLC
Mtpa	Million tonnes per annum	ROE	Return on equity
MW	Megawatt	ROR	Rate of return
MWh	Megawatt hour	RPS	Renewables Portfolio Standard
NAV	Net asset value	RSAs	Restricted stock awards
NDT	Nuclear Decommissioning Trusts	RSUs	Restricted stock units
NEIL	Nuclear Electric Insurance Limited	S&P	Standard & Poor's
NEM	Net energy metering	SB	Senate Bill
NEXI	Nippon Export and Investment Insurance	SCAQMD	South Coast Air Quality Management District
NOL	Net operating loss	SDG&E	San Diego Gas & Electric Company
NRC	Nuclear Regulatory Commission	Securities Act	The U.S. Securities Act of 1933
OCI	Other comprehensive income (loss)	SEDATU	Secretaría de Desarrollo Agrario, Territorial y Urbano
OII	Order Instituting Investigation	SFP	Secondary financial protection
OMEC	Otay Mesa Energy Center	SGRP	Steam Generator Replacement Project
OMEC LLC	Otay Mesa Energy Center LLC	SGS	Sempra Global Services, Inc.
ORA	Office of Ratepayer Advocates	Shell	Shell México Gas Natural
OSINERGMIN	Organismo Supervisor de la Inversión en Energía y Minería (Energy and Mining Investment Supervisory Body) (Peru)	SoCalGas	Southern California Gas Company
Otay Mesa VIE	OMEC LLC VIE	SONGS	San Onofre Nuclear Generating Station
OTC	Over-the-counter	SONGS OII	CPUC's Order Instituting Investigation (OII) into the SONGS Outage
PBOP	Other postretirement benefit plans	SWPL	Southwest Powerlink
PBOP plan trusts	Other postretirement benefit plan trusts	Tanggung PSC	Tanggung PSC Contractors
PCB	Polychlorinated Biphenyl	TdM	Termoelectrica de Mexicali
PEMEX	Petróleos Mexicanos (Mexican state-owned oil company)	Tecnored	Tecnored S.A.
PFM	Petition for modification	Tecsur	Tecsur S.A.
PG&E	Pacific Gas and Electric Company	TO4	Electric Transmission Formula Rate
PHMSA	Pipeline and Hazardous Materials Safety Administration	TOU	Time-of-Use
PPA	Power purchase agreement	TURN	The Utility Reform Network
PP&E	Property, plant and equipment	U.S. GAAP	Accounting principles generally accepted in the United States of America
PRP	Potentially Responsible Party	VaR	Value at risk
PSEP	Pipeline Safety Enhancement Plan	VAT	Value-added tax
PTC	Production tax credits	Ventika	Ventika, S.A.P.I. de C.V. and Ventika II, S.A.P.I. de C.V. (collectively, Ventika)
RBS	The Royal Bank of Scotland plc	VIE	Variable interest entity
		WEMA	Wildfire Expense Memorandum Account
		Willmut Gas	Willmut Gas Company

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Francisco Mualim

Chief Executive Officer, Chilquinta Energía, S.A.

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Senior Vice President and President,
LNG & Midstream, Sempra LNG & Midstream

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Chairman and Chief Executive Officer,
Infraestructura Energética Nova, S.A. de C.V.

* 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
Attn: Sempra Energy
6201 15th Avenue
Brooklyn, NY 11219
Telephone: 877-773-6772
Email: info@amstock.com
Hearing Impaired (TTY):
866-703-9077 or 718-921-8386
Internet: Amstock.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
Fax: 619-696-1868
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, code of ethics 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 Billings
Director - Investor Relations
Telephone: 619-696-2901
Fax: 619-696-1868

Stock Exchange Listings

Sempra Energy Common Stock:
Ticker Symbol: SRE
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 Amstock.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 necessarily based upon assumptions with respect to the future, involve risks and uncertainties, and are not guarantees of performance. These forward-looking statements represent our estimates and assumptions only as of the filing date of our 2016 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," "potential," "possible," "proposed," "target," "pursue," "outlook," "maintain," or similar expressions, or when we discuss guidance, strategies, plans, goals, opportunities, projections, initiatives, objectives or intentions, we are making forward-looking statements.

Factors, among others, that could cause actual results and future actions to differ materially from those described in forward-looking statements include: actions and the timing of actions, including decisions, new regulations, and issuances of permits and other authorizations by the California Public Utilities Commission, U.S. Department of Energy, California Division of Oil, Gas, and Geothermal Resources, Federal Energy Regulatory Commission, U.S. Environmental Protection Agency, Pipeline and Hazardous Materials Safety Administration, Los Angeles County Department of Public Health, states, cities and counties, and other regulatory and governmental bodies in the United States and other countries in which we operate; the timing and success of business development efforts and construction projects, including risks in obtaining or maintaining permits and other authorizations on a timely basis, risks in completing construction projects on schedule and on budget, and risks in obtaining the consent and participation of partners; the resolution of civil and criminal litigation and regulatory investigations; deviations from regulatory precedent or practice that result in a reallocation of benefits or burdens among shareholders and ratepayers; modifications of settlements; and delays in, or disallowance or denial of, regulatory agency authorizations to recover costs in rates from customers (including with respect to regulatory assets associated with the San Onofre Nuclear Generating Station facility and 2007 wildfires) or regulatory agency approval for projects required to enhance safety and reliability; the availability of electric power, natural gas and liquefied natural gas, and natural gas pipeline and storage capacity, including disruptions caused by failures in the transmission grid, moratoriums on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures; changes in energy markets; volatility in commodity prices; moves to reduce or eliminate reliance on natural gas; and the impact on the value of our investment in natural gas storage and related assets from low natural gas prices, low volatility of natural gas prices and the inability to procure favorable long-term contracts for storage services; risks posed by actions of third parties who control the operations of our investments, and risks that our partners or counterparties will be unable or unwilling to fulfill their contractual commitments; weather conditions, natural disasters, accidents, equipment failures, explosions, terrorist attacks and other events that disrupt our operations, damage our facilities and systems, cause the release of greenhouse gases, radioactive materials and harmful emissions, cause wildfires 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) or may be disputed by insurers; 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; the ability to win competitively bid infrastructure projects against a number of strong and aggressive competitors; capital markets and economic conditions, including the availability of credit and the liquidity of our investments; fluctuations in inflation, interest and currency exchange rates and our ability to effectively hedge the risk of such fluctuations; changes in the tax code as a result of potential federal tax reform, such as the elimination of the deduction for interest and non-deductibility of all, or a portion of, the cost of imported materials, equipment and commodities; changes in foreign and domestic trade policies and laws, including border tariffs, revisions to favorable international trade agreements, and changes that make our exports less competitive or otherwise restrict our ability to export; expropriation of assets by foreign governments and title and other property disputes; the impact on reliability of San Diego Gas & Electric Company's (SDG&E) electric transmission and distribution system due to increased amount and variability of power supply from renewable energy sources; the impact on competitive customer rates due to the growth in distributed and local power generation and the corresponding decrease in demand for power delivered through SDG&E's electric transmission and distribution system and from possible departing retail load resulting from customers transferring to Direct Access and Community Choice Aggregation; 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 in this report and other reports that we file with the Securities and Exchange Commission.



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