



2016 FORM 10-K



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

FORM 10-K

(Mark One)

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

For the fiscal year ended

December 31, 2016

OR

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

For the transition period from

to

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

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

Title of Each Class	Name of Each Exchange on Which Registered
Sempra Energy Common Stock, without par value	NYSE

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

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

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

Sempra Energy	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
San Diego Gas & Electric Company	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Southern California Gas Company	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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

Sempra Energy	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
San Diego Gas & Electric Company	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Southern California Gas Company	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

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

Yes X No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

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

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

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

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

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

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

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

Aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2016:

Sempra Energy	\$28.4 billion (based on the price at which the common equity was last sold as of the last business day of the most recently completed second fiscal quarter)
San Diego Gas & Electric Company	\$0
Southern California Gas Company	\$0

Common Stock outstanding, without par value, as of February 21, 2017:

Sempra Energy	250,543,688 shares
San Diego Gas & Electric Company	Wholly owned by Enova Corporation, which is wholly owned by Sempra Energy
Southern California Gas Company	Wholly owned by Pacific Enterprises, which is wholly owned by Sempra Energy

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

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the 2016 Annual Report to Shareholders of Sempra Energy, San Diego Gas & Electric Company and Southern California Gas Company are incorporated by reference into Parts I, II and IV.

Portions of the Sempra Energy Proxy Statement prepared for its May 2017 annual meeting of shareholders are incorporated by reference into Part III.

Portions of the Southern California Gas Company Information Statement prepared for its May 2017 annual meeting of shareholders are incorporated by reference into Part III.

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

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

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 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.

PART I.

ITEM 1. BUSINESS

DESCRIPTION OF BUSINESS

We provide a description of Sempra Energy and its subsidiaries in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and additional information by reporting segment in Note 16 of the Notes to Consolidated Financial Statements, both of which are included in the 2016 Annual Report to Shareholders (Annual Report), which is attached as Exhibit 13.1 to this report and is incorporated herein by reference.

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 in this report to “we,” “our,” “us,” “our company” and “Sempra Energy Consolidated” are to Sempra Energy and its consolidated entities, collectively, unless otherwise indicated by the context. SDG&E and SoCalGas are collectively referred to as the California Utilities. They are subsidiaries of Sempra Energy, and Sempra Energy indirectly owns all of the capital stock of SDG&E and all of the common stock and substantially all of the voting stock of SoCalGas.

Sempra Energy’s principal operating units are

- Sempra Utilities, which includes our SDG&E, 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.

All references to “Sempra Utilities” and “Sempra Infrastructure” and their respective principal segments are not intended to refer to any legal entity with the same or similar name. Sempra Infrastructure also owns or owned (during periods presented in the report) utilities which are not included in our references to the Sempra Utilities. We provide financial information about all of our reportable segments and about the geographic areas in which we do business in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Note 16 of the Notes to Consolidated Financial Statements in the Annual Report.

COMPANY WEBSITES

Company website addresses are

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

We make available free of charge on our website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission (SEC). The charters of the audit, compensation and corporate governance committees of Sempra Energy’s board of directors (the board), the board’s corporate

governance guidelines, and Sempra Energy's code of business conduct and ethics for directors and officers (which also applies to directors and officers of SDG&E and SoCalGas) are posted on Sempra Energy's website.

SDG&E and SoCalGas make available free of charge via a hyperlink on their websites their annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC.

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

The SEC also maintains a website that contains reports, proxy and information statements and other information we file with the SEC at www.sec.gov. Copies of these reports, proxy and information statements and other information may also be obtained, after paying a duplicating fee, by electronic request at certified@sec.gov, or by writing the SEC's Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330.

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

GOVERNMENT REGULATION

California State Utility Regulation

The California Utilities are principally regulated by the California Public Utilities Commission (CPUC), the California Energy Commission (CEC) and the California Air Resources Board (CARB).

The CPUC:

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

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

We provide further discussion in Notes 13, 14 and 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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

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

The state of California requires certain California electric retail sellers, including SDG&E, to deliver a percentage of their retail energy sales from renewable energy sources. The rules governing this requirement, administered by both the CPUC and the CEC, are generally known as the Renewables Portfolio Standard (RPS) Program. We discuss this requirement as it applies to SDG&E in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report.

Certification of a generation project by the CEC as an Eligible Renewable Energy Resource (ERR) allows the purchase of output from such generation facility to be counted towards fulfillment of the RPS Program requirements, if such purchase meets the provisions of California Senate Bill X1-2. This may affect the demand for output from renewables projects developed by Sempra Renewables and Sempra Mexico, particularly from California utilities. We have obtained or plan to obtain ERR certification for all of our renewable facilities operating in and/or providing power to California as they become operational.

California Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, assigns responsibility to CARB for monitoring and establishing policies for reducing greenhouse gas (GHG) emissions. The bill requires CARB to develop and adopt a comprehensive plan for achieving real, quantifiable and cost-effective GHG emission reductions, including a statewide GHG emissions cap, mandatory reporting rules, and regulatory and market mechanisms to achieve reductions of GHG emissions. CARB is a department within the California Environmental Protection Agency, an organization that reports directly to the Governor's Office in the Executive Branch of California State Government. Sempra LNG & Midstream and Sempra Mexico are also subject to the rules and regulations of CARB. We provide further discussion of GHG emissions in Note 1 of the Notes to Consolidated Financial Statements in the Annual Report.

The operation and maintenance of SoCalGas' natural gas storage facilities are regulated by the California Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR), in accordance with various other state and local agencies described below in "Other State and Local Regulation Within the U.S."

United States Utility Regulation

The California Utilities are also regulated by the Federal Energy Regulatory Commission (FERC), the Nuclear Regulatory Commission (NRC), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy (DOE) and the U.S. Department of Transportation (DOT).

In the case of SDG&E, the FERC regulates the interstate sale and transportation of natural gas, the transmission and wholesale sales of electricity in interstate commerce, transmission access, rates of return on transmission investment, the uniform systems of accounts, rates of depreciation and electric rates involving sales for resale. The National Energy Policy Act governs procedures for requests for transmission service. The FERC approved the California investor-owned utilities' (IOUs) transfer of operation and control of their transmission facilities to the Independent System Operator (ISO) in 1998.

In the case of SoCalGas, the FERC regulates the interstate sale and transportation of natural gas and the uniform systems of accounts.

The NRC oversees the licensing, construction, operation and decommissioning of nuclear facilities in the United States, including the San Onofre Nuclear Generating Station (SONGS), in which SDG&E owns a 20-percent interest. NRC and various state regulations require extensive review of the safety, radiological and environmental aspects of these facilities. The majority owner of SONGS, Southern California Edison Company (Edison), made a decision to permanently retire the facility in June 2013. We provide further discussion of current SONGS matters involving the NRC and the closure of the facility in Note 13 of the Notes to Consolidated Financial Statements in the Annual Report.

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

Other State and Local Regulation Within the U.S.

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

SoCalGas has natural gas franchises with the 12 counties and the 223 cities in its service territory. These franchises allow SoCalGas to locate, operate and maintain facilities for the transmission and distribution of natural gas. Most of the franchises have indefinite lives with no expiration date. Some franchises have fixed expiration dates, ranging from 2017 to 2062. SoCalGas seeks to renew or extend these agreements prior to their expiration. Major franchise agreements include those for Los Angeles County and the City of Los Angeles. The Los Angeles County franchise agreement was entered into in 1955, with the current extension expiring in December 2017. The City of Los Angeles franchise was entered into in 1992, with the current extension expiring in June 2017.

SDG&E has

- electric franchises with the two counties served and the 27 cities in or adjoining its electric service territory; and
- natural gas franchises with the one county and the 18 cities in its natural gas service territory.

These franchises allow SDG&E to locate, operate and maintain facilities for the transmission and distribution of electricity and/or natural gas. Most of the franchises have indefinite lives with no expiration dates. Some natural gas and some electric franchises have fixed expiration dates that range from 2021 to 2035.

Sempra Renewables has operations, investments or development projects in various U.S. markets. Sempra LNG & Midstream develops and invests in liquefied natural gas (LNG)-related infrastructure in North America, develops and operates natural gas storage facilities in Alabama and Mississippi and owns a 50.2-percent interest in a liquefaction project in Louisiana. It is also seeking authorization to develop an LNG natural gas liquefaction and export terminal in Port Arthur, Texas.

Other U.S. Regulation

The FERC regulates certain Sempra Renewables and Sempra LNG & Midstream assets pursuant to the Federal Power Act (FPA) and Natural Gas Act, which provide for FERC jurisdiction over, among other things, sales of wholesale power in interstate commerce, transportation and storage of natural gas in interstate commerce, and siting and permitting of LNG terminals. In addition, certain Sempra Renewables power generation assets are required under the FPA to comply with reliability standards developed by the North American Electric Reliability Corporation. Bay Gas Storage Company, Ltd.'s (Bay Gas) natural gas storage operations are also regulated by the Alabama Public Service Commission.

Sempra LNG & Midstream also has an investment in Cameron LNG Holdings, LLC (Cameron LNG JV), located in Louisiana, that is subject to regulations of the DOE regarding the export of LNG. We discuss Sempra LNG & Midstream's investments further in Note 4 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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

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

Foreign Regulation

Our Sempra Mexico segment owns, develops and operates the following in Mexico:

- natural gas pipelines, ethane systems and a liquid petroleum gas pipeline and associated storage terminal
- electric generation facilities, including wind and solar power generation facilities and a natural gas-fired power plant in Baja California, Mexico; in February 2016, management approved a plan to market and sell the natural gas-fired power plant, as we discuss in Note 3 of the Notes to Consolidated Financial Statements in the Annual Report
- natural gas distribution systems in Mexicali, Chihuahua, and the La Laguna-Durango zone in north-central Mexico
- the Energía Costa Azul LNG regasification terminal located in Baja California, Mexico

These operations and projects are subject to regulation by the Energy Regulatory Commission (Comisión Reguladora de Energía, or CRE), the Safety, Energy and Environment Agency (Agencia de Seguridad, Energía y Ambiente), the Secretary of Energy (Secretaría de Energía) and other labor and environmental agencies of city, state and federal governments in Mexico.

Sempra Mexico's operations in Mexico include the Sempra Energy subsidiary Infraestructura Energética Nova, S.A.B. de C.V. (IEnova), which has common stock held by noncontrolling interests. The issuance of shares was approved and is subject to regulation by the Mexican National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, or

CNBV) for registration of the shares with the Mexican National Securities Registry (Registro Nacional de Valores) maintained by the CNBV. IEnova's shares are traded on the Mexican Stock Exchange (La Bolsa Mexicana de Valores, S.A.B. de C.V., or BMV) under the symbol "IENOVA."

Sempra South American Utilities has two utilities in South America that are subject to laws and regulations in the localities and countries in which they operate. Chilquinta Energía S.A. (including its subsidiaries, Chilquinta Energía) is an electric distribution utility serving customers in the region of Valparaíso in central Chile. Luz del Sur S.A.A. (including its subsidiaries, Luz del Sur) is an electric distribution utility in the southern zone of metropolitan Lima, Peru. These utilities serve primarily regulated customers, and their revenues are based on tariffs that are set by the National Energy Commission (Comisión Nacional de Energía) in Chile and the Energy and Mining Investment Supervisory Body (Organismo Supervisor de la Inversión en Energía y Minería, or OSINERGMIN) in Peru. Luz del Sur has common stock held by noncontrolling interests. The shares are subject to regulation by the Superintendencia del Mercado de Valores (Superintendency of Securities Market, or SMV). Luz del Sur's shares are traded on the Lima Stock Exchange (Bolsa de Valores de Lima) under the symbol LUSURC1.

Licenses and Permits

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

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

Sempra Mexico and Sempra LNG & Midstream obtain licenses and permits for the construction, operation and expansion of LNG facilities, and the import and export of LNG and natural gas.

Sempra Renewables obtains a number of permits, authorizations and licenses in connection with the construction and operation of power generation facilities, and in connection with the wholesale distribution of electricity.

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

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

We describe other regulatory matters related to our projects in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Our Business" in the Annual Report.

ELECTRIC UTILITY OPERATIONS

SDG&E

Customers

SDG&E's service area covers 4,100 square miles. At December 31, 2016, SDG&E had approximately 1.4 million electric customer meters consisting of approximately:

- 1,275,600 residential
- 151,100 commercial
- 400 industrial
- 5,000 direct access
- 2,000 street and highway lighting

We describe various matters impacting customer growth at SDG&E in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report.

Resource Planning and Power Procurement

SDG&E's resource planning, power procurement and related regulatory matters are discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" and in Notes 14 and 15 of the Notes to Consolidated Financial Statements in the Annual Report.

Electric Resources

The supply of electric power available to SDG&E for resale is based on CPUC-approved purchased-power contracts currently in place with various suppliers, SDG&E's wholly owned generating facilities, and purchases on a spot basis. This supply as of December 31, 2016 is as follows:

SDG&E ELECTRIC RESOURCES			
Resource	Number of contracts	Expiration date	Megawatts
Purchased-power contracts:			
Contracts with Qualifying Facilities (QFs)(1):			
Cogeneration	6	2017 and thereafter	139
Cogeneration tolling contracts(2)	2	2024, 2025	101
Total			<u>240</u>
Other contracts with renewable sources:			
Wind	15	2018 to 2035	1,233
Solar PV	21	2030 to 2041	1,306
Bio-gas/Hydro	16	2017 and thereafter	38
Total			<u>2,577</u>
Tolling(2) and other contracts:			
Natural gas tolling contracts	4	2019 to 2039	800
Hydro/Pump storage	1	2037	40
Market(3)	2	2019, 2022	193
Total			<u>1,033</u>
Total contracted			<u>3,850</u>
Owned generation, natural gas:			
Palomar Energy Center			566
Desert Star Energy Center			485
Miramar Energy Center			96
Cuyamaca Peak Energy Plant			47
Total owned generation			<u>1,194</u>
Total contracted and owned generation			<u>5,044</u>

(1) A QF is a generating facility which meets the requirements for QF status under the Public Utility Regulatory Policies Act of 1978. It includes cogeneration facilities, which produce electricity and another form of useful thermal energy (such as heat or steam) used for industrial, commercial, residential or institutional purposes.

(2) Tolling contracts are purchased-power agreements under which SDG&E provides natural gas for generation to the energy supplier.

(3) Agreements to purchase firm energy during specific periods at fixed prices.

Charges under most of the contracts with QFs are based on what it would incrementally cost SDG&E to produce the power or procure it from other sources. Charges under the remaining contracts are for firm and as-generated energy, and are based on the amount of energy received or are tolls based on available capacity. The prices under these contracts are based on the market value at the time the contracts were negotiated.

Natural Gas Supply

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

Power Pool

SDG&E is a participant in the Western Systems Power Pool, which includes an electric-power and transmission-rate agreement that allows access to power trading with more than 300 member utilities, power agencies, energy brokers and power marketers located throughout the United States and Canada. Participants are able to make power transactions on

standardized terms, including market-based rates, preapproved by the FERC. Participation in the Western Systems Power Pool is intended to assist members in managing power delivery and price risk.

Electric Transmission System

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

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

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

Chilquinta Energía

Customers

Chilquinta Energía has approximately 688,000 customer meters in the region of Valparaíso in central Chile, with a service area covering 4,400 square miles. At December 31, 2016, its customer meters consisted of approximately:

- 634,700 residential
- 38,700 commercial
- 1,400 industrial
- 7,700 street and highway lighting
- 5,300 agricultural

In Chile, customers are classified as regulated and non-regulated customers based on installed capacity. Regulated customers are those whose installed capacity is less than 500 kilowatts (kW). Non-regulated customers are those whose installed capacity is greater than 2,000 kW. Customers with installed capacity between 500 kW and 2,000 kW may choose to be classified as regulated or non-regulated. Non-regulated customers can buy power from other sources, such as directly from the generator.

In 2016, Chilquinta Energía added approximately 16,000 new customer meters at a growth rate of 2.3 percent. Chilquinta Energía's electric energy sales increased by approximately 13,000 megawatt hours (MWh) and decreased by approximately 57,000 MWh in 2016 and 2015, respectively, representing an annual growth rate of 0.4 percent in 2016 and a decline of 1.9 percent in 2015. The decrease in electric energy sales in 2015 was primarily due to the transfer of certain non-regulated customers from Chilquinta Energía to the energy-services company, Tecnores S.A., a subsidiary of Semptra South American Utilities in Chile.

Electric Resources

The supply of electric power available to Chilquinta Energía comes from purchased-power contracts currently in place with its various suppliers and its suppliers' generating facilities. This supply as of December 31, 2016 was as follows:

CHILQUINTA ENERGÍA ELECTRIC RESOURCES			
Resource	Number of contracts	Expiration date	Megawatts
Purchased-power contracts(1)(2):			
Thermal/Hydro/Wind/Solar/Biomass	29	2020 to 2026	447
Small generation plants:			
Thermal			8
Total			455

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

(2) In 2016, energy contracts in the Central Interconnected System, where Chilquinta Energía operates, were supplied 53 percent from thermal, 37 percent from hydro, 4 percent from wind, 3 percent from solar and 3 percent from biomass sources.

Power Generation System

Centers for Economic Load Dispatch (Centros de Despacho Económico de Carga, or CDEC), private organizations, were in charge of coordinating the operation of the electricity system until December 31, 2016. Each interconnected system was subject to its own CDEC. Chilquinta Energía operates within CDEC-SIC (Sistema Interconectado Central, or Central Interconnected System).

Effective January 1, 2017, the National Electric System is operated and coordinated by the National Electric Coordinator (Coordinador Eléctrico Nacional), a new independent entity. This institution is managed by a Directive Council (Consejo Directivo) formed by five members designated through a public tender. This new entity functions as a continuation of the CDEC for the central and northern interconnected system.

Transmission System and Access

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

We discuss transmission line projects that have been completed or are ongoing at Chilquinta Energía's joint ventures in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Our Business" in the Annual Report.

Luz del Sur

Customers

Luz del Sur has approximately 1,078,000 customer meters in the southern zone of metropolitan Lima, Peru, with a service area covering approximately 1,394 square miles. At December 31, 2016, its customer meters consisted of approximately:

- 1,011,500 residential
- 56,600 commercial
- 4,100 industrial
- 5,100 street and highway lighting
- 500 agricultural

In Peru, customers are classified as regulated and non-regulated customers based on capacity demand. Regulated customers are those whose capacity demand is less than 200 kW and their energy supply is considered public service. Non-regulated customers are those whose capacity demand is greater than 2,500 kW. Customers with capacity demand between 200 kW and 2,500 kW may choose to be classified as regulated or non-regulated.

In 2016, Luz del Sur added approximately 25,000 new customer meters at a growth rate of 2.4 percent. However, Luz del Sur's electric energy sales decreased by approximately 162,000 MWh in 2016, compared to an increase of approximately 262,000 MWh in 2015, representing a decrease in annual growth rate of 2.1 percent in 2016 and an increase of 3.6 percent in 2015. The decrease in electric energy sales in 2016 is primarily due to the migration of regulated and non-regulated customers to tolling customers, who only pay a tolling fee and do not contribute to customer load.

Electric Resources

The supply of electric power available to Luz del Sur comes from purchased-power contracts currently in place with various suppliers, as well as purchases made on an as-needed basis. Luz del Sur also uses the supply of power generated by Santa Teresa, its wholly owned 100-MW hydroelectric power plant in Peru's Cusco region.

Luz del Sur's electric power supply as of December 31, 2016 was as follows:

LUZ DEL SUR ELECTRIC RESOURCES			
Resource	Number of contracts	Expiration date	Megawatts
Purchased-power contracts(1):			
Bilateral contract:			
Hydro/Thermal	1	2019	25
Auction contracts:			
Hydro	14	2021 to 2025	233
Thermal	21	2021 to 2025	687
Hydro/Thermal	26	2021 to 2025	537
Total contracted			<u>1,482</u>
Owned generation, Hydro:			
Santa Teresa(2)			<u>61</u>
Total contracted and owned generation			<u>1,543</u>

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

(2) Firm capacity is estimated at 61 MW based on guidelines established by the system operator in Peru and historical water flows. Available excess capacity is sold on the spot market.

Power Generation System

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

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

Transmission System and Access

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

We discuss ongoing transmission line and substation projects at Luz del Sur in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Our Business" in the Annual Report.

CALIFORNIA NATURAL GAS UTILITY OPERATIONS

SoCalGas and SDG&E sell, distribute and transport natural gas. SoCalGas purchases and stores natural gas for its core customers and SDG&E's core customers on a combined portfolio basis and provides natural gas storage services for others. We discuss the California Utilities' resource planning, natural gas procurement, contractual commitments, and related regulatory matters below. We also provide further discussion in "Management's Discussion and Analysis of Financial Condition and Results of Operations," and in Notes 14 and 15 of the Notes to Consolidated Financial Statements in the Annual Report.

Customers

At December 31, 2016, SoCalGas had approximately 5.9 million customer meters consisting of approximately:

- 5,656,500 residential
- 247,300 commercial
- 26,000 industrial
- 50 electric generation and wholesale

At December 31, 2016, SDG&E had approximately 878,000 natural gas customer meters consisting of approximately:

- 845,600 residential
- 28,600 commercial
- 3,900 electric generation and transportation

For regulatory purposes, end-use customers are classified as either core or noncore customers. Core customers are primarily residential and small commercial and industrial customers. Noncore customers at SoCalGas consist primarily of electric generation, wholesale, large commercial and industrial, and enhanced oil recovery customers. SoCalGas' wholesale customers are primarily other IOUs, including SDG&E, or municipally owned natural gas distribution systems. Noncore customers at SDG&E consist primarily of electric generation and large commercial customers.

Most core customers purchase natural gas directly from SoCalGas or SDG&E. While core customers are permitted to purchase directly from producers, marketers or brokers, the California Utilities are obligated to provide reliable supplies of natural gas to serve the requirements of their core customers. Noncore customers are responsible for the procurement of their natural gas requirements.

Natural Gas Procurement and Transportation

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

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

Natural Gas Storage

SoCalGas owns four natural gas storage facilities. The facilities have a combined working gas capacity of 137 billion cubic feet (Bcf) and have over 200 injection, withdrawal and observation wells. Natural gas withdrawn from storage is important for ensuring service reliability during peak demand periods, including heating needs in the winter, as well as peak electric generation needs in the summer. The Aliso Canyon natural gas storage facility represents 63 percent of SoCalGas' natural gas storage capacity. SoCalGas discovered a natural gas leak at one of its wells at the Aliso Canyon facility in October 2015, and permanently sealed the well in February 2016. SoCalGas has not injected natural gas into Aliso Canyon since October 25, 2015, pursuant to orders from DOGGR and the Governor, and Senate Bill (SB) 380, all discussed in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report. Limited withdrawals of natural gas from Aliso Canyon have been made in 2017 to augment natural gas supplies during critical demand periods. 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. 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 on February 1 and 2, 2017 to receive public comment on DOGGR's findings from its gas storage and well safety review and proposed pressure limits for the Aliso Canyon natural gas storage facility. The public comment period has expired. It remains for DOGGR to issue its safety determination, after which the CPUC must concur with DOGGR's determination, before injections at the facility can resume. We discuss the Aliso Canyon natural gas storage facility gas leak in "Risk Factors" below and in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

SoCalGas also provides natural gas storage services directly to its customers. It uses the majority of its natural gas storage capacity to provide service to its residential and smaller business customers and offers the remaining storage capacity for sale to others.

Demand for Natural Gas

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

One of the larger sources for natural gas demand is electric generation. Natural gas-fired electric generation within Southern California (and demand for natural gas supplied to such plants) competes with electric power generated throughout the western United States. Natural gas transported for electric generating plant customers may be affected by the overall demand for electricity, growth in renewable generation (including rooftop solar), the addition of more efficient gas technologies, new energy efficiency initiatives, and the extent that regulatory changes in electric transmission infrastructure investment divert electric generation from the California Utilities' respective service areas. The demand may also fluctuate due to volatility in the demand for electricity due to climate change, weather conditions and other impacts, and the availability of competing supplies of electricity such as hydroelectric generation and other renewable energy sources. We provide additional information regarding the electric industry and related infrastructure projects and regulatory impacts at the California Utilities in "Our Business" and "Factors Influencing Future Performance" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in Note 14 of the Notes to Consolidated Financial Statements in the Annual Report.

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

RATES AND REGULATION

We provide information concerning rates and regulation applicable to our utilities in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in Notes 1, 13 and 14 of the Notes to Consolidated Financial Statements in the Annual Report.

SEMPRA INFRASTRUCTURE

We provide descriptions of Sempra Infrastructure's segments and information concerning their operations in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in Notes 1, 3, 4, 15 and 16 of the Notes to Consolidated Financial Statements in the Annual Report.

Competition

Sempra Energy's non-utility businesses are among many others in the energy industry providing similar services. They are engaged in competitive activities that require significant capital investments and skilled and experienced personnel. Among these competitors there may be significant variation in financial, personnel and other resources compared to Sempra Infrastructure.

Generation – Renewables

Sempra Renewables primarily competes for wholesale contracts for the generation and sale of electricity through its development of and investments in wind and solar power generation facilities. Sempra Renewables also competes with other non-utility generators, regulated utilities, unregulated subsidiaries of regulated utilities, and other energy service companies for sales of non-contracted renewable energy. The number and type of competitors may vary based on location, generation type and project size. Also, regulatory initiatives designed to enhance energy consumption from renewable resources for regulated utility companies may increase competition from these types of institutions. These utilities may have a cost of capital that differs from most independent renewable power producers and often are able to recover fixed costs through rate base mechanisms. This allows them to build, buy and upgrade renewable generation projects without relying exclusively on market clearing prices to recover their investments. Additionally, generation from Sempra Renewables' renewable energy assets is exposed to fluctuations in naturally occurring conditions such as wind, inclement weather and hours of sunlight.

Our renewable energy competitors include, among others:

- Avangrid
- First Solar
- Invenergy
- MidAmerican Energy
- NextEra Energy Resources
- NRG Energy

Because Sempra Mexico sells the power that it generates at its Energía Sierra Juárez wind power generation facility into California, it is also impacted by these competitive factors.

LNG

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

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

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

Global LNG competition may limit U.S. LNG exports, as international liquefaction projects attempt to match U.S. Gulf Coast LNG production costs and customer contractual rights such as volume and destination flexibility. Host governments for international liquefaction projects are altering fiscal and tax regimes in an effort to make projects in their jurisdictions competitive relative to U.S. projects; however, sustained low oil prices may cause some of the international projects to become unfeasible due to their LNG price formulas' link to oil prices. It is expected that U.S. LNG exports will increase competition for current and future global natural gas demand, and thereby facilitate development of a global commodity market for natural gas and LNG.

Sempra LNG & Midstream has a 50.2-percent equity interest in Cameron LNG JV, which owns a regasification facility in Hackberry, Louisiana. The joint venture began construction in the second half of 2014 on a natural gas liquefaction export facility using some of the existing regasification infrastructure. The joint venture has authorization to export LNG to both Free Trade Agreement (FTA) countries and to countries that do not have an FTA with the United States.

Cameron LNG JV has 20-year liquefaction and regasification tolling capacity agreements in place with ENGIE S.A. and affiliates of Mitsubishi Corporation and Mitsui & Co., Ltd., which subscribe the full nameplate capacity of three trains at the facility. In addition, Cameron LNG JV is working on the development of up to two additional trains. We discuss Cameron LNG JV in Notes 3 and 4 of the Notes to Consolidated Financial Statements and the construction of the first three trains in "Our Business" and "Factors Influencing Future Performance" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Annual Report. Our joint venture partners, affiliates of ENGIE S.A., Mitsubishi Corporation (through a related company jointly established with Nippon Yusen Kabushiki Kaisha), and Mitsui & Co., Ltd., compete globally to market and sell LNG to end users, including gas and electric utilities located in LNG importing countries around the world. By providing liquefaction services, Cameron LNG JV will compete indirectly with liquefaction projects currently operating and those under development in the global LNG market. In addition to the U.S., these competitors are located in the Middle East, Southeast Asia, Africa, South America, Australia and Europe.

Sempra Energy is also taking steps to explore the development of additional LNG export facilities at Sempra LNG & Midstream's Port Arthur, Texas property and Sempra Mexico's Energía Costa Azul regasification facility.

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

- BP
- Cheniere Energy
- Chevron
- ConocoPhillips
- ExxonMobil
- Kinder Morgan
- Petronas
- Qatar Petroleum
- Royal Dutch Shell
- Total
- Woodside

Natural Gas Pipelines and Storage Facilities

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

Sempra LNG & Midstream's competitors include, among others:

- Boardwalk Pipeline Partners
- Cardinal Gas Storage Partners
- Columbia Energy
- Enbridge
- Energy Transfer Partners
- Enterprise Products Partners
- Kinder Morgan
- Macquarie Infrastructure Partners
- Plains All American Pipeline
- Southern Company Gas
- TransCanada
- The Williams Companies

Sempra Mexico's competitors include, among others:

- Carso Energy
- Enagas
- ENGIE S.A.
- Fermaca
- Kinder Morgan
- TransCanada

ENVIRONMENTAL MATTERS

We discuss environmental issues affecting us in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report. You should read the following additional information in conjunction with those discussions.

Hazardous Substances

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

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

Air and Water Quality

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

We discuss environmental matters concerning SoCalGas' Aliso Canyon natural gas storage facility in "Risk Factors" below, and in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" and Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

EXECUTIVE OFFICERS OF THE REGISTRANTS

EXECUTIVE OFFICERS OF SEMpra ENERGY			
Name	Age(1)	Positions Held Over Last Five Years	Time in Position
Debra L. Reed(2)	60	Chairman	December 2012 to present
		Chief Executive Officer	June 2011 to present
Mark A. Snell(3)	60	President	October 2011 to present
Joseph A. Householder	61	Corporate Group President - Infrastructure Businesses	January 2017 to present
		Executive Vice President and Chief Financial Officer	October 2011 to December 2016
Steven D. Davis	61	Corporate Group President - Utilities	January 2017 to present
		Executive Vice President - External Affairs and Corporate Strategy	September 2015 to December 2016
		President and Chief Operating Officer, SDG&E	January 2014 to September 2015
		Senior Vice President - External Affairs	March 2012 to December 2013
J. Walker Martin	55	Vice President - Investor Relations	May 2010 to March 2012
		Executive Vice President and Chief Financial Officer	January 2017 to present
		Chairman, SDG&E	November 2015 to December 2016
		President, SDG&E	October 2015 to December 2016
Martha B. Wyrsh	59	Chief Executive Officer, SDG&E	January 2014 to December 2016
		President and Chief Executive Officer, Sempra U.S. Gas & Power	October 2011 to December 2013
		Executive Vice President and General Counsel	September 2013 to present
		President, Vestas American Wind Systems	June 2009 to December 2012
Dennis V. Arriola	56	Executive Vice President and Chief Financial Officer	January 2017 to present
		Chairman, SoCalGas	November 2015 to December 2016
		Chief Executive Officer, SoCalGas	March 2014 to December 2016
		President, SoCalGas	August 2012 to September 2016
		Chief Operating Officer, SoCalGas	August 2012 to January 2014
		Executive Vice President and Chief Financial Officer, SunPower Corporation	January 2008 to January 2012
Trevor I. Mihalik	50	Senior Vice President	December 2013 to present
		Controller and Chief Accounting Officer	July 2012 to present
		Senior Vice President of Finance, Iberdrola Renewables Holdings, Inc.	July 2010 to July 2012
G. Joyce Rowland	62	Senior Vice President, Chief Human Resources Officer and Chief Administrative Officer	September 2014 to present
		Senior Vice President - Human Resources, Diversity and Inclusion	May 2010 to September 2014

(1) Ages are as of February 28, 2017.

(2) Ms. Reed also becomes President effective on March 1, 2017.

(3) Mr. Snell will be retired as of March 1, 2017.

EXECUTIVE OFFICERS OF SDG&E

Name	Age(1)	Positions Held Over Last Five Years	Time in Position
Scott D. Drury	51	President	January 2017 to present
		Chief Energy Supply Officer	June 2015 to December 2016
		Vice President - Human Resources, Diversity and Inclusion	March 2011 to June 2015
James P. Avery(2)	60	Chief Development Officer	June 2015 to present
		Senior Vice President - Power Supply	April 2009 to June 2015
J. Chris Baker	57	Chief Information Officer	June 2015 to present
		Senior Vice President and Chief Information Technology Officer	January 2014 to June 2015
		Senior Vice President - Strategic Planning and Technology	September 2012 to January 2014
		Senior Vice President - Support Services	April 2010 to August 2012
Lee Schavrien	62	Chief Administrative Officer	June 2015 to present
		Senior Vice President of Regulatory Affairs and Operations Support	February 2015 to June 2015
		Senior Vice President - Finance, Regulatory and Legislative Affairs	April 2010 to February 2015
Erbin B. Keith	56	Chief Regulatory and Risk Officer and General Counsel	September 2016 to present
		Senior Vice President and General Counsel	October 2014 to September 2016
		Vice President and Special Projects Counsel, Sempra Energy	May 2014 to October 2014
		Senior Vice President and General Counsel, SoCalGas	August 2012 to August 2014
		General Counsel, SoCalGas	April 2010 to August 2014
Caroline A. Winn	53	Senior Vice President - External Affairs	April 2010 to August 2012
		Chief Operating Officer	January 2017 to present
		Chief Energy Delivery Officer	June 2015 to December 2016
Bruce A. Folkmann	49	Vice President - Customer Services	April 2010 to June 2015
		Vice President, Controller, Chief Financial Officer, Chief Accounting Officer and Treasurer	March 2015 to present
		Vice President and Chief Financial Officer, Sempra U.S. Gas & Power	July 2013 to March 2015
		Vice President and Controller, Sempra U.S. Gas & Power	August 2012 to September 2013
		Assistant Controller, Sempra Energy	July 2012 to August 2012
Acting Controller, Sempra Energy	October 2011 to July 2012		

(1) Ages are as of February 28, 2017.

(2) Mr. Avery will be retired as of April 1, 2017.

EXECUTIVE OFFICERS OF SOCALGAS

Name	Age(1)	Positions Held Over Last Five Years	Time in Position
Patricia K. Wagner	54	Chief Executive Officer	January 2017 to present
		Executive Vice President, Sempra Energy	September 2016 to December 2016
		President and Chief Executive Officer, Sempra U.S. Gas & Power	January 2014 to September 2016
		Vice President of Audit Services, Sempra Energy	February 2012 to December 2013
		Vice President of Accounting and Finance, SoCalGas	November 2010 to February 2012
J. Bret Lane	57	President	September 2016 to present
		Chief Operating Officer	January 2014 to present
		Senior Vice President - Gas Operations and System Integrity, SDG&E and SoCalGas	August 2012 to January 2014
		Vice President - Field Services, SDG&E and SoCalGas	April 2010 to August 2012
J. Chris Baker	57	Chief Information Officer	June 2015 to present
		Senior Vice President and Chief Information Technology Officer	January 2014 to June 2015
		Senior Vice President - Strategic Planning and Technology	September 2012 to January 2014
		Senior Vice President - Support Services	April 2010 to August 2012
Lee Schavrien	62	Chief Administrative Officer	June 2015 to present
		Senior Vice President of Regulatory Affairs and Operations Support	February 2015 to June 2015
		Senior Vice President - Finance, Regulatory and Legislative Affairs	April 2010 to February 2015
Sharon L. Tomkins	51	Vice President and General Counsel	August 2014 to present
		Assistant General Counsel	April 2010 to August 2014
Bruce A. Folkmann	49	Vice President, Controller, Chief Financial Officer, Chief Accounting Officer and Treasurer	March 2015 to present
		Vice President and Chief Financial Officer, Sempra U.S. Gas & Power	July 2013 to March 2015
		Vice President and Controller, Sempra U.S. Gas & Power	August 2012 to September 2013
		Assistant Controller, Sempra Energy	July 2012 to August 2012
		Acting Controller, Sempra Energy	October 2011 to July 2012

(1) Ages are as of February 28, 2017.

OTHER MATTERS

Employees of the Registrants

At December 31, each company has the following number of employees:

NUMBER OF EMPLOYEES	December 31,	
	2016	2015
Sempra Energy Consolidated(1)	16,575	17,387
SDG&E(1)	4,134	4,315
SoCalGas	8,042	8,438

(1) Excludes employees of variable interest entities as defined by accounting principles generally accepted in the United States of America.

Labor Relations

SDG&E

Field employees and some clerical and technical employees at SDG&E are represented by the International Brotherhood of Electrical Workers. Provisions of the collective bargaining agreement covering wages and working conditions for these employees are in effect through August 31, 2020 (subject to wage renegotiation on September 1, 2019). For these same employees, the agreement covering pension and savings plan benefits is in effect through October 1, 2017 and the agreement covering health and welfare benefits is in effect through December 31, 2017. At December 31, 2016, 29 percent of SDG&E employees are covered by these agreements.

SoCalGas

Field, technical and most clerical employees at SoCalGas are represented by the Utility Workers Union of America or the International Chemical Workers Union Council (collectively "Union") under a single collective bargaining agreement. The provisions of the collective bargaining agreement for these employees covering wages, hours, working conditions, medical and all other benefit plans are in effect through September 30, 2018. At December 31, 2016, 60 percent of SoCalGas employees are represented by the Union.

Sempra South American Utilities

Field, technical and administrative employees at Luz del Sur are represented by various labor unions. In January 2017, two collective bargaining agreements were signed covering these employees, which will also be extended to 141 nonrepresented employees. It will cover wages, working conditions and other benefit plans, and will be in effect from January 1, 2017 through December 31, 2017.

Field, technical and administrative employees at Chilquinta Energía are represented under various collective bargaining agreements with different labor unions. The collective bargaining agreements for employees represented by these unions and negotiating groups cover wages, hours, working conditions and medical and other benefit plans and expire between 2017 and 2020.

Professional employees at Chilquinta Energía are represented by the Professional Union. The collective bargaining agreement for these employees covers wages, hours, working conditions and medical and other benefit plans and is in effect through July 2017.

At December 31, 2016, Sempra South American Utilities has a total of 1,140 employees in Peru, of whom 23 percent are covered under a labor agreement, and 1,464 employees in Chile, of whom 45 percent are covered under labor agreements.

Sempra Mexico

At December 31, 2016, Sempra Mexico has 883 employees, 4 percent of whom are covered by various collective bargaining agreements with different labor unions. The collective bargaining agreements are subject to renegotiation on an annual basis with respect to wages, and otherwise on a bi-annual basis.

ITEM 1A. RISK FACTORS

When evaluating our company and its subsidiaries, you should consider carefully the following risk factors and all other information contained in this report. These risk factors could materially adversely affect our actual results and cause such results to differ materially from those expressed in any forward-looking statements made by us or on our behalf. We may also be materially harmed by risks and uncertainties not currently known to us or that we currently deem to be immaterial. If any of the following occurs, our businesses, cash flows, results of operations, financial condition and/or prospects could be materially negatively impacted. In addition, the trading prices of our securities and those of our subsidiaries could substantially decline due to the occurrence of any of these risks. These risk factors should be read in conjunction with the other detailed information concerning our company set forth in the Annual Report, including, without limitation, the information set forth in the Notes to Consolidated Financial Statements and in “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” In this section, when we state that a risk or uncertainty may, could or will have a “material adverse effect” on us or may, could or will “materially adversely affect” us, we mean that the risk or uncertainty may, could or will, as the case may be, have a material adverse effect on our businesses, cash flows, results of operations, financial condition, prospects and/or the trading prices of our securities or those of our subsidiaries.

Sempra Energy’s cash flows, ability to pay dividends and ability to meet its debt obligations largely depend on the performance of its subsidiaries and the ability to utilize the cash flows from those subsidiaries.

Sempra Energy’s ability to pay dividends and meet its debt obligations depends almost entirely on cash flows from its subsidiaries and, in the short term, its ability to raise capital from external sources. In the long term, cash flows from the subsidiaries depend on their ability to generate operating cash flows in excess of their own expenditures, common and preferred stock dividends (if any), and long-term debt obligations. In addition, the subsidiaries are separate and distinct legal entities that are not obligated to pay dividends and could be precluded from making such distributions under certain circumstances, including, without limitation, as a result of legislation, regulation, court order, contractual restrictions or in times of financial distress.

A significant portion of our worldwide cash reserves are generated by, and therefore held in, foreign jurisdictions. Some jurisdictions impose taxes on cash transferred to the United States, which could reduce the cash available to us. To the extent we have excess cash in foreign locations that could be used in, or is needed by, our United States operations, we may incur significant U.S. and foreign taxes to repatriate these funds.

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

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

Limitations on the availability of credit and increases in interest rates or credit spreads may materially adversely affect our businesses, cash flows, results of operations, financial condition and/or prospects, as well as our ability to meet contractual and other commitments. In difficult credit market environments, we may find it necessary to fund our operations and capital expenditures at a higher cost or we may be unable to raise as much funding as we need to support new business activities.

This could cause us to reduce capital expenditures and could increase our cost of servicing debt, both of which could significantly reduce our short-term and long-term profitability.

The availability and cost of credit for our businesses may be greatly affected by credit ratings. If SoCalGas or SDG&E were to have their credit ratings downgraded, their cash flows and results of operations could be materially adversely affected, and any downgrades of Sempra Energy’s credit ratings could materially adversely affect the cash flows and results of operations of Sempra Energy. If the credit ratings of Sempra Energy or any of its subsidiaries were downgraded, especially below investment grade, financing costs and the principal amount of borrowings would likely increase due to the additional risk of our debt and because certain counterparties may require collateral in the form of cash, a letter of credit or other forms of security for new and existing transactions. Such amounts may be material and could adversely affect our cash flows, results of operations and financial condition.

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

We have significant foreign operations in Mexico and South America. Our foreign operations pose complex management, foreign currency, inflation, legal, tax and economic risks, which we may not be able to fully mitigate with our actions. These risks differ from and potentially may be greater than those associated with our domestic businesses. All of our international businesses are sensitive to geo-political uncertainties, and our non-utility international businesses are sensitive to changes in

the priorities and budgets of international customers, all of which may be driven by changes in their environments and potentially volatile worldwide economic conditions, and various regional and local economic and political factors, risks and uncertainties, as well as U.S. foreign policy. Foreign currency exchange and inflation rates and fluctuations in those rates may have an impact on our revenue, costs or cash flows from our international operations, which could materially adversely affect our financial performance. Our currency exposures are to the Mexican, Peruvian and Chilean currencies. Our Mexican subsidiaries have U.S. dollar denominated monetary assets and liabilities that give rise to Mexican currency exchange rate movements for Mexican income tax purposes. They also have deferred income tax assets and liabilities, which are significant, denominated in the Mexican peso that must be translated to U.S. dollars for financial reporting purposes. In addition, monetary assets and liabilities and certain nonmonetary assets and liabilities are adjusted for Mexican inflation for Mexican income tax purposes. Our primary objective in reducing foreign currency risk is to preserve the economic value of our foreign investments and to reduce earnings volatility that would otherwise occur due to exchange rate fluctuations. We may attempt to offset material cross-currency transactions and earnings exposure through various means, including financial instruments and short-term investments. Because we generally do not hedge our net investments in foreign countries, we are susceptible to volatility in other comprehensive income caused by exchange rate fluctuations, primarily related to our South American subsidiaries, whose functional currency is not the U.S. dollar. We generally do not hedge our deferred income tax assets and liabilities, which makes us susceptible to volatility in income tax expense. We discuss our foreign currency exposure at our Mexican subsidiaries in “Results of Operations – Impact of Foreign Currency and Inflation Rates on Results of Operations” and “Market Risk – Foreign Currency and Inflation Rate Risk” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report.

Mexico has developed a new legal framework for the regulation of the hydrocarbons and electric power sectors based on a package of constitutional amendments approved by the Mexican Congress in December 2013 and implementing legislation enacted in 2014 and the issuance of new regulations thereunder. However, given the relatively recent creation of this legal framework, it is uncertain how it will be interpreted in practice. We also cannot predict the manner in which the new legal framework will affect any new business opportunities that IEnova may wish to pursue. The changes introduced by the new legal framework may require IEnova to obtain amendments to its existing permits or secure additional permits to operate its energy facilities or to provide its services, to take additional actions to secure rights-of-way for its projects, to perform social impact assessments, and to obtain the consent of indigenous communities for the development of certain projects, any or all of which may cause IEnova to incur additional material costs in connection with the development of its projects.

The current U.S. administration has previously indicated its intention to renegotiate trade agreements, such as the North American Free Trade Agreement, or NAFTA, and implement U.S. immigration policy changes. The current U.S. administration has stated that it is reviewing various options, including tariffs, for funding new Mexico–U.S. border security infrastructure. Such actions could result in changes in the Mexican, U.S. and other markets. In addition, if this occurs, the Mexican government could implement retaliatory actions, such as the imposition of restrictions or import fees on Mexican imports of natural gas from the U.S. or imports and exports of electricity to and from the U.S. Any of these actions by either or both governments could adversely affect imports and exports between Mexico and the U.S. and negatively impact the Mexican economy and the companies with whom we conduct business in Mexico, which could materially adversely affect our business, financial condition, results of operations, cash flows, or prospects.

Risks Related to All Sempra Energy Subsidiaries

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

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

- natural gas, propane and ethane pipelines, storage and compression facilities
- electric transmission and distribution
- power generation plants, including natural gas-fired and renewable energy generation
- LNG terminals and storage
- nuclear fuel and nuclear waste storage facilities
- nuclear power facilities (currently being decommissioned)

Such incidents could result in severe business disruptions, prolonged power outages, property damage, injuries or loss of life, significant decreases in revenues and earnings, and/or significant additional costs to us. Any such incident could have a material adverse effect on our businesses, financial condition, results of operations, cash flows and/or prospects.

Depending on the nature and location of the facilities and infrastructure affected, any such incident also could cause catastrophic fires; natural gas, natural gas odorant, propane or ethane leaks; releases of other greenhouse gases; radioactive releases; explosions, spills or other significant damage to natural resources or property belonging to third parties; personal injuries, health impacts or fatalities; or present a nuisance to impacted communities. Any of these consequences could lead to significant claims against us. In some cases, we may be liable for damages even though we are not at fault, such as in cases where the concept of inverse condemnation applies. Insurance coverage may significantly increase in cost, may be disputed by the insurers, or may become unavailable for certain of these risks, and any insurance proceeds we receive may be insufficient to cover our losses or liabilities due to the existence of limitations, exclusions, high deductibles, failure to comply with procedural requirements, and other factors, which could materially adversely affect our businesses, financial condition, results of operations, cash flows and/or prospects.

Severe weather conditions may also impact our businesses, including our international operations. Drought conditions in California and the western United States increase the risk of catastrophic wildfires in SDG&E's and SoCalGas' service territories, which could place third party property and our electric and natural gas infrastructure in jeopardy. Drought conditions also reduce the amount of power available from hydro-electric generation facilities in the Northwest United States, which could adversely impact the availability of a reliable energy supply into the California electric grid managed by the California ISO. If alternate supplies of electric generation are not available to replace the lower level of power available from hydro-electric generation facilities, this could result in temporary power shortages in SDG&E's service territory. In addition, severe weather conditions could result in delays and/or cost increases to our capital projects.

Another example of weather impacting operations is a strong El Niño weather pattern in the Pacific Ocean, which can cause severe rainstorms in coastal areas. Significant rainstorms and associated high winds, such as those caused by a strong El Niño weather pattern, could damage our electric and natural gas infrastructure, resulting in increased expenses, including higher maintenance and repair costs, and interruptions in electricity and natural gas delivery services. As a result, these events can have significant financial consequences, including regulatory penalties and disallowances if the California Utilities or our utilities in Mexico or South America encounter difficulties in restoring service to their customers on a timely basis. Further, the cost of storm restoration efforts may not be fully recoverable through the regulatory process. Any such events could have a material adverse effect on our businesses, financial condition, results of operations and cash flows.

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

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

Our businesses are subject to increasingly complex accounting and tax requirements, and the regulations, laws and tariffs that affect us may change in response to economic or political conditions. Compliance with these requirements could increase our operating costs, and new tax legislation, regulations or other interpretations in the U.S. and other countries in which we operate could materially adversely affect our tax expense and/or tax balances. Changes in tax policies, including potential tax reform provisions, 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, could materially adversely impact our business. Changes in regulations, laws and tariffs and how they are implemented and interpreted may have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects. We discuss potential U.S. federal tax reform further in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report.

Our operations are subject to rules relating to transactions among the California Utilities and other Sempra Energy businesses. These rules are commonly referred to as "affiliate rules," which primarily impact commodity and commodity-related transactions. These businesses could be materially adversely affected by changes in these rules or to their interpretations, or by additional CPUC or FERC rules that further restrict our ability to sell electricity or natural gas to, or to trade with, the California Utilities and with each other. Affiliate rules also could require us to obtain prior approval from the CPUC before entering into any such transactions with the California Utilities. Any such restrictions on or approval

requirements for transactions among affiliates could materially adversely affect the LNG terminals, natural gas pipelines, electric generation facilities, or other operations of our subsidiaries, which could have a material adverse effect on our businesses, results of operations and/or prospects.

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

All of our existing and planned development projects require multiple approvals. The acquisition, construction, ownership and operation of LNG terminals; natural gas pipelines and distribution and storage facilities; electric generation, transmission and distribution facilities; and propane and ethane systems require numerous permits, licenses, franchise agreements, certificates and other approvals from federal, state, local and foreign governmental agencies. Once received, approvals may be subject to litigation, and projects may be delayed or approvals reversed or modified in litigation. In addition, permits, licenses, franchise agreements, certificates, and other approvals may be modified, rescinded or fail to be extended by one or more of the governmental agencies and authorities that oversee our businesses. SoCalGas' franchise agreements with the City of Los Angeles and Los Angeles County, where the Aliso Canyon facility is located, are due to expire in 2017. If there is a delay in obtaining required regulatory approvals or failure to obtain or maintain required approvals or to comply with applicable laws or regulations, we may be precluded from constructing or operating facilities, or we may be forced to incur additional costs. Further, accidents beyond our control may cause us to violate the terms of conditional use permits, causing delays in projects. Any such delay or failure to obtain or maintain necessary permits, licenses, certificates and other approvals could cause our sales to materially decline, and/or our costs to materially increase, and otherwise materially adversely affect our businesses, cash flows, financial condition, results of operations and/or prospects.

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

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

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

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

We provide further discussion of these matters in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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

Sempra Energy and its subsidiaries are defendants in numerous lawsuits and arbitration proceedings. We have spent, and continue to spend, substantial amounts of money and time defending these lawsuits and proceedings, and in related investigations and regulatory proceedings. We discuss pending proceedings in Note 15 of the Notes to Consolidated Financial Statements and in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report. The uncertainties inherent in lawsuits, arbitrations and other legal proceedings make it difficult to estimate with any degree of certainty the costs and effects of resolving these matters. In addition, juries have demonstrated a willingness to grant large awards, including punitive damages, in personal injury, product liability, property damage and other claims. Accordingly, actual costs incurred may differ materially from insured or reserved amounts and may not be recoverable in whole or in part in rates from our customers, which in each case could materially adversely affect our businesses, cash flows, results of operations and/or financial condition.

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

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

In addition, possible changes in federal regulation of over-the-counter derivatives regulated by the U.S. Commodity Futures Trading Commission could impact the cost and effectiveness of our hedging programs, as we discuss in “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance” in the Annual Report.

Risk management procedures may not prevent losses.

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

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

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

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

In addition to general information and cyber risks that all Fortune 500 corporations face (e.g. malware, malicious intent by insiders and inadvertent disclosure of sensitive information), the utility industry faces evolving cybersecurity risks associated with protecting sensitive and confidential customer information, Smart Grid infrastructure, and natural gas pipeline and storage infrastructure. Deployment of new business technologies represents a new and large-scale opportunity for attacks on our information systems and confidential customer information, as well as on the integrity of the energy grid and the natural gas infrastructure. While our computer systems have been, and will likely continue to be, subjected to computer viruses or other malware, unauthorized access attempts, and cyber- or phishing-attacks, to date we have not detected a material breach of cybersecurity. Addressing these risks is the subject of significant ongoing activities across Sempra Energy's businesses, but we cannot ensure that a successful attack has not and will not occur. An attack on our information systems, the integrity of the energy grid, our natural gas, ethane, or propane pipeline and storage infrastructure or one of our facilities, or unauthorized access to confidential customer information, could result in energy delivery service failures, financial loss, violations of privacy laws, customer dissatisfaction and litigation, any of which, in turn, could have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects.

In the ordinary course of business, Sempra Energy and its subsidiaries collect and retain sensitive information, including personal identification information about customers and employees, customer energy usage and other information. The theft, damage or improper disclosure of sensitive electronic data can subject us to penalties for violation of applicable privacy laws, subject us to claims from third parties, require compliance with notification and monitoring regulations, and harm our reputation.

Finally, as seen with recent cyber-attacks around the world, the goal of a cyber-attack may be primarily to inflict large-scale harm on a company and the places where it operates. Any such cyber-attack could cause widespread disruptions to our operating and administrative systems, including the destruction of critical information and programming, that could materially adversely affect our business operations and the integrity of the power grid, and/or release confidential information about our company and our customers, employees and other constituents.

Our businesses will need to continue to adapt to technological change which may cause us to incur significant expenditures to adapt to these changes and which efforts may not be successful.

Emerging technologies may be superior to, or may not be compatible with, some of our existing technologies, investments and infrastructure, and may require us to make significant expenditures to remain competitive, or may result in the obsolescence of certain of our operating assets or the operating assets of our equity method investments. Our future success will depend, in part, on our ability and our investment partners' abilities to anticipate and successfully adapt to technological changes, to offer services that meet customer demands and evolving industry standards and to recover all, or a significant portion of, any unrecovered investment in obsolete assets. If we incur significant expenditures in adapting to technological changes, fail to adapt to significant technological changes, fail to obtain access to important new technologies, fail to recover a significant portion of any remaining investment in obsolete assets, or if implemented technology fails to operate as intended, our businesses, operating results and financial condition could be materially and adversely affected. Examples of technological changes that could negatively impact our businesses include

- Sempra Utilities – Technologies that could change the utilization of natural gas distribution and electric generation, transmission and distribution assets including
 - energy storage technology, and
 - the expanded cost-effective utilization of distributed generation (e.g., rooftop solar and community solar projects).
- Sempra Infrastructure
 - At Sempra Renewables, technological advances in distributed and local power generation and energy storage could reduce the demand for large-scale renewable electricity generation. Sempra Renewables' power sales customers' ability to perform under long-term agreements could be impacted by changes in utility rate structures and advances in distributed and local power generation.
 - At Sempra LNG & Midstream, technological advances could reduce the demand for natural gas. These technologies include cost-effective batteries for renewable electricity generation, economic improvements to gas-to-liquids conversion processes, and advances in alternative fuels and other alternative energy sources.

Risks Related to the California Utilities

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

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

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

The CPUC conducts various reviews and audits of utility performance, safety standards and practices, compliance with CPUC regulations and standards, affiliate relationships and other matters. These reviews and audits may result in disallowances, fines and penalties that could materially adversely affect our financial condition, results of operations and/or cash flows. SoCalGas and SDG&E may be subject to penalties or fines related to their operation of natural gas pipelines and storage and, for SDG&E, electric operations, under regulations concerning natural gas pipeline safety and citation programs concerning both gas and electric safety, which could have a material adverse effect on their results of operations, financial condition and/or cash flows. We discuss various CPUC proceedings relating to the California Utilities' rates, costs, incentive mechanisms, and performance-based regulation in Notes 13, 14 and 15 of the Notes to Consolidated Financial Statements and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Annual Report.

The CPUC periodically approves the California Utilities' rates based on authorized capital expenditures, operating costs, including income taxes, and an authorized rate of return on investment. Delays by the CPUC on decisions authorizing recovery or authorizations for less than full recovery may adversely affect the working capital and financial condition of each of the California Utilities. If the California Utilities receive an adverse CPUC decision and/or actual capital expenditures and/or operating costs were to exceed the amounts approved by the CPUC, our results of operations, financial condition, cash flows and/or prospects could be materially adversely affected. Reductions in key benchmark interest rates may trigger automatic adjustment mechanisms which would reduce the California Utilities' authorized rates of return, changes in which could materially adversely affect their results of operations, financial condition, cash flows and/or prospects.

In December 2014, the CPUC issued a decision incorporating a risk-based decision-making framework into all future general rate case (GRC) application filings for major natural gas and electric utilities in California. As the framework is still in the developing stages, we cannot estimate whether its application in future GRC applications will result in full recovery of costs. We discuss this further in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report.

The CPUC applies performance-based measures and mechanisms to all California utilities. Under these, earnings potential over authorized base margins is tied to achieving or exceeding specific performance and operating goals, and reductions in authorized base margins are tied to not achieving specific performance and operating goals. At both of the California Utilities, the areas that are currently eligible for performance mechanisms are operational activities designated by the CPUC and energy efficiency programs; at SDG&E, electric reliability performance; and, at SoCalGas, natural gas procurement and unbundled natural gas storage and system operator hub services. Although the California Utilities have received incentive awards in the past, there can be no assurance that they will receive awards in the future, or that any future awards earned would be in amounts comparable to prior periods. Additionally, if the California Utilities fail to achieve certain minimum performance levels established under such mechanisms, they may be assessed financial disallowances, penalties and fines which could have a material adverse effect on their results of operations, financial condition and/or cash flows.

In September 2016, California adopted new laws concerning the CPUC that establish rules governing, among other subjects, communications between CPUC officials, CPUC staff and regulated utilities. Changes to the rules and processes around *ex parte* communications could result in delayed decisions, increased investigations, enforcement actions and penalties. In addition, the CPUC or other parties may initiate investigations of past communications between public utilities and CPUC officials and staff that could result in reopening completed proceedings for reconsideration.

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

The California Utilities may be materially adversely affected by new legislation, regulations, decisions, orders or interpretations of the CPUC, the FERC or other regulatory bodies. In addition, existing legislation or regulations may be revised or reinterpreted. New, revised or reinterpreted legislation, regulations, decisions, orders or interpretations could

change how the California Utilities operate, could affect their ability to recover various costs through rates or adjustment mechanisms, or could require them to incur substantial additional expenses.

The construction and expansion of the California Utilities' natural gas pipelines, SoCalGas' storage facilities, and SDG&E's electric transmission and distribution facilities require numerous permits, licenses, rights-of-way and other approvals from federal, state and local governmental agencies, including approvals and renewals of rights-of-way over Native American tribal land held in trust by the federal government. If there are delays in obtaining these approvals, failure to obtain or maintain these approvals, difficulties in renewing rights-of-way and other property rights, or failure to comply with applicable laws or regulations, the California Utilities' businesses, cash flows, results of operations, financial condition and/or prospects could be materially adversely affected. Coordinating these projects for successful completion requires good execution from our employees and contractors, cooperation of third parties and the absence of litigation and regulatory delay. In the event that one or more of these projects is delayed or experiences significant cost overruns, this could have a material adverse effect on the California Utilities. The California Utilities could experience difficulties in renewing rights-of-way or other forms of property rights for existing assets, which could have a material adverse effect on the California Utilities. The California Utilities may invest a significant amount of money in a major capital project prior to receiving regulatory approval. If the project does not receive regulatory approval, if the regulatory approval is conditioned on major changes, or if management decides not to proceed with the project, they may be unable to recover any or all amounts invested in that project, which could materially adversely affect their financial condition, results of operations, cash flows and/or prospects.

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

- the rates charged to our customers;
- our ability to site and construct new facilities;
- our ability to purchase or construct generating facilities;
- safety;
- the issuance of securities;
- accounting and income tax matters;
- transactions between affiliates;
- the installation of environmental emission controls equipment;
- our ability to decommission generating and other facilities and recover the remaining carrying value of such facilities and related costs;
- our ability to recover costs incurred in connection with nuclear decommissioning activities from trust funds established to pay for such costs;
- the amount of certain sources of energy we must use, such as renewable sources; limits on the amount of certain energy sources we can use, such as natural gas; and programs to encourage reductions in energy usage by customers; and
- the amount of costs associated with these and other operations that may be recovered from customers.

SoCalGas will incur significant costs and expenses related to remediating the natural gas leak at its Aliso Canyon natural gas storage facility and to mitigate local community and environmental impacts from the leak, some or a substantial portion of which may not be recoverable through insurance, and SoCalGas also may incur significant liabilities for fines, penalties, damages and greenhouse gas mitigation activities as a result of this incident, some or a significant portion of which may not be recoverable through insurance.

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

Local Community Mitigation Efforts

Pursuant to 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, at significant expense to SoCalGas. 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 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. 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 mitigate local community impacts of the leak 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.

Governmental Investigations and Civil and Criminal Litigation

Various governmental agencies, including DOGGR, DPH, SCAQMD, CARB, Los Angeles Regional Water Quality Control Board, California Division of Occupational Safety and Health, CPUC, PHMSA, EPA, Los Angeles County District Attorney's Office and California Attorney General's Office, have investigated or are investigating this incident. Other federal agencies (e.g., the DOE and U.S. Department of the Interior) investigated the incident in conjunction with the preparation of an Interagency Task Force report, *Ensuring Safe and Reliable Underground Natural Gas Storage*, published in October 2016. In January 2016, DOGGR and the CPUC selected Blade Energy Partners 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. This investigation is currently ongoing.

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. 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. 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.

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, and four shareholder derivative actions alleging breach of fiduciary duties have been filed against certain officers and directors of Sempra Energy and/or SoCalGas. Three complaints have also been filed by public entities, including the California Attorney General, the SCAQMD and the County of Los Angeles. These complaints seek various remedies, including injunctive relief, abatement of the public nuisance, civil penalties, payment of the cost of a longitudinal health study, and money damages, as well as punitive damages and attorneys' fees. In February 2017, SoCalGas entered into a settlement agreement with the SCAQMD under which SoCalGas will pay \$8.5 million and SCAQMD will dismiss its complaint and petition for dismissal of a stipulated abatement order issued by its Hearing Board. 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 and for allegedly violating certain California Health and Safety Code provisions. On November 29, 2016, the court approved a settlement between SoCalGas and the District Attorney's Office whereby SoCalGas agreed to plead no contest to a misdemeanor for the alleged failure to provide timely notice of the leak and to spend approximately \$4.3 million on reimbursement of government agency expenses, operational commitments, and fines and penalties, in exchange for the dismissal of the remaining counts. 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.

Additional litigation may be filed against us in the future related to the Aliso Canyon incident or our responses thereto. For a more detailed description of the governmental investigations and civil and criminal lawsuits brought against us, see Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

The costs of defending against the civil and criminal lawsuits, cooperating with the various investigations, and any damages, restitution, and civil and criminal fines, costs and other penalties, if awarded or imposed, 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.

Governmental Orders and Additional Regulation

In January 2016, the Governor of the State of California issued an 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 imposed various orders with respect to: stopping the leak; protecting public health and safety; ensuring accountability; and strengthening oversight. Also in January 2016, the Hearing Board of the SCAQMD ordered SoCalGas to take various actions in connection with injections and withdrawals of natural gas at Aliso Canyon, sealing the well, monitoring, reporting, safety and funding a health study, among other things. As discussed above, SoCalGas has 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 Governor's Order and SCAQMD's order in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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 recommended approach to achieve full mitigation of the climate impacts from the Aliso Canyon natural gas leak, which includes recommendations that:

- reductions in short-lived climate pollutants and other greenhouse gases be at least equivalent to the amount of the emissions from the leak,
- a 20-year global warming potential be used in deriving the amount of reductions required (rather than the 100-year term the CARB and other state and federal agencies use in regulating emissions), and
- all of the mitigation occur in California over the next five to ten years without the use of allowances or offsets.

In October 2016, CARB issued a 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. Although we have not agreed with CARB's estimate of methane released, we continue to work with CARB on developing a mitigation plan. 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.

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," and imposes a "user fee" on underground storage facilities as needed to implement the safety standards. In October 2016, the Interagency Task Force formed by the DOE and PHMSA in response to the leak at Aliso Canyon issued its report, recommending that PHMSA adopt new safety regulations and providing 44 specific recommendations to industry and to federal, state, and local regulators and governments, which may result in additional regulations.

PHMSA, DOGGR, SCAQMD, EPA and CARB have each commenced separate rulemaking proceedings to adopt further regulations covering natural gas storage facilities and injection wells. DOGGR has issued new draft regulations for all storage fields in California, and in 2016, the California Legislature enacted four separate bills providing for additional regulation of natural gas storage facilities. Also, 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. We provide further detail regarding new regulations and legislation in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" and Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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. 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 on February 1 and 2, 2017 to receive public comment on DOGGR's findings from its gas storage and well safety review and proposed pressure limits for the Aliso Canyon natural gas storage facility. The public comment period has expired. It remains for DOGGR to issue its safety determination, after which the CPUC must concur with DOGGR's 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.

Insurance and Estimated Costs

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 we have received \$169 million of insurance proceeds 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. 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. In addition, any costs not included in the \$780 million estimate could be material. The \$780 million estimate does not include unsettled damage claims, restitution, or civil, administrative or criminal fines, costs and other penalties. In addition, such estimate excludes the costs to clean additional homes pursuant to the DPH Directive, future legal costs to defend litigation and other potential costs that we currently do not anticipate incurring or that we cannot reasonably estimate. There can be no assurance that we will be successful in obtaining insurance coverage for these costs under the applicable policies, and to the extent we are not successful in obtaining coverage, or if such costs are 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.

Additional Information

We discuss Aliso Canyon matters further in Note 15 of the Notes to Consolidated Financial Statements and in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report.

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

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

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

Various PSEP-related proceedings are regularly pending before the CPUC regarding the California Utilities' reasonableness review and cost recovery requests, which are often challenged by intervening parties. These proceedings are described in more detail in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" in the Annual Report. In the future, consumer advocacy groups may similarly challenge the

California Utilities' petitions for recovery and recommend disallowances in whole or in part with respect to applications to recover PSEP costs.

From 2011 through 2016, SoCalGas and SDG&E have invested \$1.1 billion and \$302 million, respectively, in PSEP. As of December 31, 2016, SoCalGas has received approval for recovery of \$33 million. If the CPUC were to deny rate recovery for PSEP and other gas pipeline safety costs incurred by SoCalGas and SDG&E, it could materially adversely affect the respective company's cash flows, financial condition, results of operations and prospects.

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

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

Under each enforcement program, each day of an ongoing violation may be counted as an additional offense. The maximum penalty is \$50,000 per offense. Citations under either program may be appealed to the CPUC. Penalties imposed under these programs can be significant, exceeding \$1.5 billion in one instance. In September 2016, the CPUC issued a decision making further refinements to the electric and gas safety enforcement programs. The decision harmonizes the rules for the two programs, further defines the criteria for issuing a citation and penalty, sets an administrative limit of \$8 million per citation issued by staff under its delegated authority and makes certain other changes to rules related to self-reporting and notifying local officials.

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

The failure by the CPUC to continue reforms of SDG&E's rate structure, including the implementation of a more significant fixed charge, could have a material adverse effect on its business, cash flows, financial condition, results of operations and/or prospects.

The current electric rate structure in California is primarily based on consumption volume, which places an undue burden on residential customers with higher electric use while subsidizing lower use customers. As higher electric use residential customers switch to self-generation or obtain local off-the-grid sources of power, such as wind, the burden on the remaining higher electric use customers increases, which in turn encourages more self-generation, further increasing rate pressure on existing 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 provides for a minimum monthly bill, fewer rate tiers and a gradual reduction in the differences between the tiered rates, directs the utilities to pursue expanded time of use rates, and implements a super-user electric surcharge in 2017 for usage that exceeds average customer usage by approximately 400 percent within each climate zone. The surcharge will increase over time, ultimately reaching a rate of more than double the first tier rate. The decision will be implemented over a five year period from 2015 to 2020, and should result in significant relief for higher-use customers that do not exceed the super-user threshold and a rate structure that better aligns rates with actual costs to serve customers. The decision also establishes a process for utilities to seek implementation of a fixed charge for residential customers in 2020 (but it also sets certain conditions for the implementation of a fixed charge), after the initial reforms are implemented. The establishment of a fixed charge for residential customers may become more critical to help ensure rates are fair for all customers as distributed energy resources could generally reduce delivered volumes and increase fixed costs.

If the CPUC fails to continue to reform SDG&E's rate structure by implementing a rate structure that maintains reasonable, cost-based electric rates that are competitive with alternative sources of power and adequate to maintain the reliability of the electric transmission and distribution system, such failure could have a material adverse effect on SDG&E's business, cash flows, financial condition, results of operations and/or prospects.

Meaningful net energy metering, or NEM, reform must continue to progress to ensure that SDG&E is authorized to recover its costs in providing services to NEM customers while minimizing the cost shift (or subsidy) being borne by non-solar customers.

Due to current rate structures and state policies, customers who self-generate their own power using eligible renewable resources (primarily solar installations) currently do not pay their proportionate cost of maintaining and operating the electric transmission and distribution system, subject to certain limitations, while they still receive power from the system when their self-generation is inadequate to meet their electricity needs. The proportionate costs not paid by NEM customers are paid (i.e., subsidized) by consumers not participating in NEM. In addition, the continuing increase of self-generated solar, other forms of self-generation and other local off-the-grid sources of power adversely impacts the reliability of the electric transmission and distribution system.

Appropriate NEM reforms are 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 between 2016 and when more significant reforms take effect in 2019 or later, as described below, 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.

In July 2014, the CPUC initiated a rulemaking proceeding to develop a successor tariff to the state's existing NEM program pursuant to the provisions of AB 327. The NEM program was originally established in 1995 and is an electric billing tariff mechanism designed to promote the installation of on-site renewable generation. Under NEM, qualifying customer-generators receive a full retail rate for the energy they generate that is fed back to the utility's power grid. This occurs during times when the customer's generation exceeds their own energy usage. In addition, if a NEM customer generates any electricity over the annual measurement period that exceeds its annual consumption, they receive compensation at a rate equal to a wholesale energy price.

In January 2016, the CPUC adopted a decision making modest changes to the NEM program, which 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 component in 2020, these changes to the NEM program begin a process of reducing the cost burden on non-NEM customers, but SDG&E believes that further reforms are necessary and appropriate. In 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.

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

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

SDG&E provides bundled electric procurement service through various resources that are typically procured on a long-term basis. While SDG&E provides such procurement service for the majority of its customer load, customers do have the ability to receive procurement service from a load serving entity other than SDG&E, through programs such as Direct Access and Community Choice Aggregation (CCA). Direct Access is currently closed, but utility customers have the ability to receive procurement through CCA, 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 borne by its remaining bundled procurement customers. This issue is addressed by rate mechanisms that attempt to ensure bundled ratepayer indifference in the event of departing load, but these existing mechanisms may not be sufficient to address the full extent of the potential cost shift in the event of

significant departing load, and SDG&E bears some risk that its procured resources become stranded and the associated costs are not recoverable.

In addition, the FERC has adopted changes that have opened transmission development to competition from independent developers, allowing such developers to compete with incumbent utilities for the construction and operation of transmission facilities. These changes could materially adversely affect SDG&E's business and prospects.

Recovery of 2007 wildfire litigation costs requires future regulatory approval, and insurance coverage for future wildfires may not be sufficient to cover losses we may incur.

SDG&E is seeking to recover in rates its reasonably incurred costs of resolving 2007 wildfire claims in excess of its liability insurance coverage and amounts recovered from third parties. Through December 31, 2016, SDG&E's payments for claim settlements plus funds estimated to be required for settlement of outstanding claims and legal fees have exceeded its liability insurance coverage and amounts recovered from third parties. However, SDG&E has concluded that it is probable that it will be permitted to recover in rates a substantial portion of the reasonably incurred costs of resolving wildfire claims in excess of its liability insurance coverage and amounts recovered from third parties. At December 31, 2016, Sempra Energy's and SDG&E's Consolidated Balance Sheets included \$352 million in Other Regulatory Assets (long-term) related to CPUC-regulated operations for these costs incurred and the estimated resolution of pending claims.

In December 2012, the CPUC issued a final decision allowing SDG&E to maintain an authorized memorandum account, enabling SDG&E to file applications with the CPUC requesting recovery of amounts properly recorded in the memorandum account, subject to reasonableness review, at a later date. In September 2015, SDG&E filed an application with the CPUC requesting rate recovery of such costs, and is proposing to recover the costs in rates over a six- to ten-year period. The CPUC has scheduled a two-phased proceeding to address SDG&E's request. SDG&E has responded to testimony submitted by intervening parties raising various concerns with SDG&E's operations and management prior to and during the 2007 wildfires, and have asked the CPUC to reject SDG&E's request for cost recovery. We discuss these cost recovery proceedings in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" and in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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 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 how we assess the probability of recovery of our regulatory assets in Note 1 of the Notes to Consolidated Financial Statements in the Annual Report.

We have experienced increased costs and difficulties in obtaining insurance coverage for wildfires that could arise from the California Utilities' operations. In addition, the insurance that has been obtained for wildfire liabilities may not be sufficient to cover all losses that we may incur. Uninsured losses and increases in the cost of insurance may not be recoverable in customer rates. A loss which is not fully insured or cannot be recovered in customer rates could materially adversely affect Sempra Energy's and the affected California Utility's financial condition, cash flows and results of operations. Furthermore, insurance for wildfire liabilities may not continue to be available at all or at rates or with terms similar to those presently available.

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

SDG&E has a 20-percent ownership interest in SONGS, a 2,150-MW nuclear generating facility near San Clemente, California, that is in the process of being decommissioned by Edison, the majority owner of SONGS. SONGS is subject to the jurisdiction of the NRC and the CPUC. On June 6, 2013, Edison notified SDG&E that it had reached a decision to permanently retire SONGS and seek approval from the NRC to start the decommissioning activities for the entire facility. SDG&E, and each of the other owners, holds its undivided interest as a tenant in common in the property, and each owner is responsible for financing its share of expenses and capital expenditures, including decommissioning activities. Although the facility is being decommissioned, SDG&E's ownership interest in SONGS continues to subject it to the risks of owning a partial interest in a nuclear generation facility, which include

- the potential that a natural disaster such as an earthquake or tsunami could cause a catastrophic failure of the safety systems in place that are designed to prevent the release of radioactive material. If such a failure were to occur, a substantial amount of radiation could be released and cause catastrophic harm to human health and the environment;

- the potential harmful effects on the environment and human health resulting from the prior operation of nuclear facilities and the storage, handling and disposal of radioactive materials;
- limitations on the amounts and types of insurance commercially available to cover losses that might arise in connection with operations and the decommissioning of the facility; and
- uncertainties with respect to the technological and financial aspects of decommissioning the facility.

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

Interpretations of tax regulations could impact access to nuclear decommissioning trust funds for reimbursement of spent nuclear fuel management costs. Depending on how the Internal Revenue Service (IRS) or the U.S. Department of Treasury ultimately interprets or alters regulations addressing the taxation of a qualified nuclear decommissioning trust, SDG&E may be restricted from withdrawing amounts from its qualified decommissioning trusts to pay for spent fuel management where Edison and SDG&E are seeking, or plan to seek, recovery of spent fuel management costs in litigation against, or in settlements with, the DOE. In December 2016, the IRS and the U.S. Department of Treasury issued proposed regulations that clarify the definition of “nuclear decommissioning costs” that may be paid for or reimbursed from a qualified fund. These proposed regulations are not yet finalized, but SDG&E is working with outside counsel to clarify with the IRS some of the provisions in the proposed regulations 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 incurred in 2016 and subsequent years. Until the DOE litigation is resolved, and/or IRS regulations regarding spent fuel management costs are confirmed to apply, SDG&E expects to continue to pay for such spent fuel management costs. If SDG&E is unable to obtain timely access to the trusts for these costs, SDG&E’s cash flows could be negatively impacted.

In November 2014, the CPUC approved the Amended Settlement Agreement that resolved the investigation into the steam generator replacement project that ultimately led to the shut-down of SONGS. Various petitions have since been filed to reopen the settlement. In December 2016, the Commissioner and Administrative Law Judge assigned to the proceeding issued a ruling directing SDG&E and Edison to “meet and confer” with other parties to the proceeding 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. If no agreement to modify the Amended Settlement Agreement is reached by April 28, 2017, the CPUC will consider other options, including entertaining additional testimony, hearings and briefs. We cannot assure you that the Amended Settlement Agreement will not be renegotiated, modified or set aside as a result of this proceeding. We provide additional detail in Note 13 of the Notes to the Consolidated Financial Statements in the Annual Report.

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

Risks Related to our Sempra South American Utilities and Sempra Infrastructure Businesses

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

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

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

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

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

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

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

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

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

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

- negotiation of satisfactory engineering, procurement and construction (EPC) agreements
- negotiation of supply and natural gas sales agreements or firm capacity service agreements

- timely receipt of required governmental permits, licenses, authorizations, and rights of way and maintenance or extension of these authorizations
- timely implementation and satisfactory completion of construction
- obtaining adequate and reasonably priced financing for the project

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

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

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

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

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

With respect to our project to add LNG export capability at the Cameron LNG facility, the Cameron LNG Holdings, LLC joint venture (Cameron LNG JV) is building an LNG export facility consisting of three liquefaction trains designed to a total 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. The anticipated incremental investment in the three-train liquefaction project is estimated to be approximately \$7 billion, including the cost of the lump-sum, turnkey construction contract, development engineering costs and permitting costs, but excluding capitalized interest and other financing costs. The total cost of the facility, including the cost of our original regasification facility contributed to the joint venture plus interest during construction, financing costs and required reserves, is estimated to be approximately \$10 billion. If construction, financing or other project costs are higher than we currently expect, we may have to contribute additional cash exceeding our current estimates. The majority of the incremental investment in the joint venture will be project-financed and the balance provided by the project partners. Any failure by the project partners to make their required investments on a timely basis could result in project delays and could materially adversely affect the development of the project. In addition, Sempra Energy has guaranteed a maximum of \$3.9 billion related to the project financing and financing-related agreements. These guarantees terminate upon Cameron LNG JV's achieving "financial completion" of the initial three-train liquefaction project, including all three trains achieving commercial operation and meeting certain operational performance tests. If, due to the joint venture's failure to satisfy the financial completion criteria, we are required to repay some or all of the \$3.9 billion under our guarantees, any such repayments could have a material adverse effect on our business, results of operations, cash flows, financial condition, and/or prospects.

Large-scale construction projects like the design, development and construction of the Cameron LNG liquefaction facility involve numerous risks and uncertainties, including among others, the potential for unforeseen engineering problems, substantial construction delays and increased costs. Cameron LNG JV has a turnkey EPC contract with a joint venture contractor comprised of subsidiaries of Chicago Bridge & Iron Company N.V. and Chiyoda Corporation, who are jointly and severally liable for performance under the contract. If the contractor becomes unwilling or unable to perform according to the terms and timetable of the EPC contract, Cameron LNG JV may be required to engage a substitute contractor, which would result in project delays and increased costs, which could be significant. The construction of this facility requires a large and specialized work force, necessary equipment and materials, and sophisticated engineering. There can be no assurance that

Cameron LNG JV's contractor will not encounter delays due to disruptions in obtaining the necessary equipment and materials, inability to field the necessary workforce, weather conditions, or engineering issues that were not contemplated. In October 2016, Cameron LNG JV received an indication from the EPC contractor that the respective in-service dates for each train may be delayed. Any such construction delays will defer a portion of the 2018 and 2019 earnings anticipated from the Cameron LNG project. As construction progresses, Cameron LNG JV may decide or be forced to submit change orders to the contractor that could result in longer construction periods and higher construction costs or both. In addition, new regulations, labor disputes, breakdown or failure of equipment and litigation could substantially delay the project. As we do not control Cameron LNG JV, we are dependent on reaching a consensus with one or more of our joint venture partners to resolve a variety of issues that could transpire. The inability to timely resolve issues, including construction issues, could cause substantial delays to the completion of this project. A substantial delay could result in cost overruns, substantially postpone the earnings we anticipate deriving from this facility, and require additional cash investments by us and our joint venture partners. The anticipated cost of this project is based on a number of assumptions that may prove incorrect, and the ultimate cost could significantly exceed the current estimate of approximately \$7 billion of incremental investment, excluding capitalized interest and other financing costs. These risks could have a material adverse effect on our business, results of operations, cash flows, financial condition, and/or prospects.

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

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

Sempra LNG & Midstream has entered into a project development agreement for the joint development of the proposed Port Arthur liquefaction project with an affiliate of Woodside Petroleum Ltd. 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 and marketing activities associated with developing the Port Arthur liquefaction project. Also, Sempra LNG & Midstream, IEnova and a subsidiary of Petróleos Mexicanos (or PEMEX, the Mexican state-owned oil company) entered into a project development agreement for the joint development of the proposed liquefaction project at IEnova's existing Energía Costa Azul regasification facility in Mexico. 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 developing the potential liquefaction project. We are sharing costs with PEMEX on the development efforts. Any decisions by the parties to proceed with binding agreements with respect to the formation of these potential joint ventures and the potential development of these projects will require, among other things, completion of project assessments and achieving other necessary internal and external approvals of each such party. In addition, all of our proposed projects are subject to a number of risks and uncertainties, including the receipt of a number of permits and approvals; finding suitable partners and customers; obtaining financing and incentives; negotiating and completing suitable commercial agreements, including joint venture agreements, tolling capacity agreements or natural gas supply and LNG sales agreements and construction contracts; and reaching a final investment decision.

Expansion of the Cameron LNG liquefaction facility beyond the first three trains is subject to certain restrictions and conditions under the joint venture project financing agreements, including among others, timing restrictions on expansion of the project unless appropriate prior consent is obtained from the project lenders. Under the Cameron LNG JV equity agreements, the expansion of the project requires the unanimous consent of all of 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 have occurred, and we are considering a variety of options to attempt to move the expansion project forward. These activities have contributed to delays in developing firm pricing information and securing customer commitments. In

light of these developments, we cannot assure you that the various consents required for expansion of the Cameron LNG project will be obtained.

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

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

We discuss these projects further in “Our Business” and “Factors Influencing Future Performance” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report.

Federal and state legislative and regulatory initiatives relating to hydraulic fracturing could reduce or eliminate LNG export opportunities and demand.

Several states have adopted or are considering adopting regulations to impose more stringent permitting, public disclosure or well construction requirements on hydraulic fracturing operations. In addition to state laws, some local municipalities have adopted or are considering adopting land use restrictions, such as city ordinances, that may restrict the performance of or prohibit the well drilling in general and/or hydraulic fracturing in particular. Hydraulic fracturing is typically regulated by state oil and natural gas commissions, but federal agencies have asserted regulatory authority over certain hydraulic fracturing activities. For example, the EPA issued permitting guidance in February 2014 under the federal Safe Drinking Water Act (SDWA) for hydraulic fracturing activities involving the use of diesel fuels. In April 2015, the EPA issued a proposed rule that would prevent the discharge of hydraulic fracturing wastewater into publicly owned treatment works, and in March 2015, the Bureau of Land Management of the U.S. Department of the Interior adopted rules imposing new requirements for hydraulic fracturing activities on federal lands, including new requirements relating to public disclosure of hydraulic fracturing chemicals, as well as wellbore integrity and handling of flowback water. In addition, the U.S. Congress has from time to time considered legislation to provide for federal regulation of hydraulic fracturing under the SDWA and to require disclosure of the chemicals used in the hydraulic fracturing process. There are also certain governmental reviews that have been conducted or are underway on deep shale and other formation completion and production practices, including hydraulic fracturing. Depending on the outcome of these studies, federal and state legislatures and agencies may seek to further regulate or even ban such activities. Certain environmental and other groups have also suggested that additional federal, state and local laws and regulations may be needed to more closely regulate the hydraulic fracturing process.

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

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

The markets in which we operate are characterized by numerous strong and capable competitors, many of whom have extensive and diversified developmental and/or operating experience (including both domestic and international) and financial resources similar to or greater than ours. Further, in recent years, the natural gas pipeline, storage and LNG market segments have been characterized by strong and increasing competition both with respect to winning new development projects and acquiring existing assets. In Mexico, despite the commissioning of many new energy infrastructure projects by

the Federal Electricity Commission (Comisión Federal de Electricidad, or CFE) and other governmental agencies in connection with energy reforms, competition for recent pipeline projects has been intense with numerous bidders competing aggressively for these projects. There can be no assurance that we will be successful in bidding for new development opportunities in the U.S., Mexico or South America. In addition, as noted above, there are a number of potential new LNG liquefaction projects under construction or in the process of being developed by various project developers in North America, including our contemplated new projects, and given the projected global demand for LNG, it is likely that most of these projects will not be completed. Finally, as existing contracts expire at our natural gas storage assets in the Gulf Coast region, we compete with other facilities for storage customers that could continue to support the existing book value of these assets, and for anchor customers that could support development of new capacity. These competitive factors could have a material adverse effect on our business, results of operations, cash flows and/or prospects.

In addition, the current U.S. administration has previously indicated its intention to renegotiate trade agreements, such as the North American Free Trade Agreement, or NAFTA. A shift in U.S. trade policies could materially adversely affect our LNG development opportunities, as well as opportunities for trade between Mexico and the United States.

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

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

At Cameron LNG JV, although the Cameron LNG terminal is partially contracted for regasification, there is a termination agreement in place that will result in the termination of the regasification contract at the point during the construction of the new liquefaction facilities where piping tie-ins to the existing regasification terminal become necessary.

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

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

Our natural gas storage assets include operational and development assets at Bay Gas Storage Company, Ltd. (Bay Gas) in Alabama and Mississippi Hub, LLC (Mississippi Hub) in Mississippi, as well as our development project, LA Storage, LLC (LA Storage) in Louisiana. LA Storage could be positioned to support LNG export from the Cameron LNG JV terminal and other liquefaction projects, if anticipated cash flows support further investment. However, changes in the U.S. natural gas market could also lead to diminished natural gas storage values. 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 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 depressed asset values. In addition, our LA Storage development project may be unable to either attract cash flow commitments sufficient to support further investment or extend its FERC construction permit beyond its 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 contracted. Market conditions could result in the need to perform recovery testing of our recorded asset values. 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. The recorded value of our long-lived natural gas storage assets at December 31, 2016 was \$1.5 billion. 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.

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

We provide information about these matters in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Annual Report.

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

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

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 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 a Sempra Mexico joint venture that holds a 50-percent interest in the Los Ramones Norte pipeline project and a customer with capacity contracts for transportation services on Sempra Mexico's ethane pipelines, if PEMEX were unable to meet any or all of its obligations to Sempra Mexico, it could have a material adverse effect on our financial condition, results of operations, cash flows and prospects.

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

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

We are engaged in disputes regarding our title to the properties adjacent to and properties where our LNG terminal in Mexico is located, as we discuss in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report. In the event that we are unable to defend and retain title to the properties on which our LNG terminal is located, we could lose our rights to occupy and use such properties and the related terminal, which could result in breaches of one or more permits or contracts that we have entered into with respect to such terminal. In addition, our ability to convert the LNG terminal into an export facility may be hindered by these disputes, and they could make project financing such a facility and finding suitable partners and customers very difficult. If we are unable to occupy and use such properties and the related terminal, it could have a material adverse effect on our businesses, financial condition, results of operations, cash flows and/or prospects.

We are also engaged in disputes regarding permits at our Energía Sierra Juárez wind project in Mexico, as we discuss in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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

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

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

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

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

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

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

We discuss litigation related to Sempra Mexico's Energía Costa Azul LNG terminal and other international energy projects in Note 15 of the Notes to Consolidated Financial Statements and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Annual Report.

IEnova's completed acquisitions of the remaining 50-percent interest in the Gasoductos de Chihuahua joint venture and of the Ventika wind power generation facilities will subject IEnova to integration challenges and risks.

IEnova's completed acquisitions of the remaining 50-percent interest in the Gasoductos de Chihuahua joint venture from Pemex TRI and of the Ventika I and Ventika II wind power facilities from Fistera Energy and certain minority shareholders will subject IEnova to substantial integration challenges and risks. IEnova's expectations for the operating performance of the existing projects and the projects under construction by Gasoductos de Chihuahua are based on assumptions and estimates derived from its prior experience in the development of joint venture projects with Pemex TRI, and IEnova's expectations regarding the results of operations of the Ventika wind power generation facilities are based on its due diligence and assumptions and estimates regarding the future productivity of those assets. The ability of these entities to achieve their expected results is subject to the risks inherent in the development, construction and management of energy projects generally. Following these acquisitions, Gasoductos de Chihuahua and/or the Ventika wind power generation facilities may not perform as expected, and the revenues generated by such acquisitions may prove insufficient to support the financing utilized to acquire such entities or to maintain such acquisitions. Furthermore, the successful integration and consolidation of any acquisition requires significant human, financial and other resources, which may distract the attention of IEnova's management from IEnova's existing projects, give rise to disruptions in such projects or result in an acquisition not being adequately integrated. IEnova may be unsuccessful at integrating either of these businesses with its own, or may experience difficulties in connection with the integration of their operations and systems (including IT, accounting, financial, control, risk management and safety systems). Any failure by IEnova to achieve the expected results, synergies and/or economies of scale from the integration of these businesses could have a material adverse effect on IEnova's business, financial condition, results of operations, cash flows, and/or prospects.

Other Risks

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

Sempra Energy makes investments in entities that we do not control or manage or in which we share control. As described above, SDG&E holds a 20-percent ownership interest in SONGS, which is in the process of being decommissioned by Edison, its majority owner. Sempra LNG & Midstream accounts for its investment in the Cameron LNG JV under the equity method, which investment is approximately \$1 billion at December 31, 2016. At December 31, 2016, Sempra Renewables had investments totaling \$844 million in several joint ventures to operate renewable generation facilities. Sempra Mexico has a 40-percent interest in a joint venture with a subsidiary of TransCanada Corporation to build, own and operate the Sur de Texas-Tuxpan natural gas marine pipeline in Mexico, a 50-percent interest in a renewables wind project in Baja California, and a 50-percent interest in a joint venture with PEMEX which, in turn, owns a 50-percent interest in the Los Ramones Norte pipeline in Mexico. At December 31, 2016, these various joint venture investments by Sempra Mexico totaled \$180 million. Sempra Energy has an investment balance of \$67 million at December 31, 2016 that reflects remaining distributions expected to be received from the RBS Sempra Commodities LLP (RBS Sempra Commodities) partnership as it is dissolved. The timing and amount of distributions may be impacted by the matters we discuss related to RBS Sempra Commodities in Notes 6 and 15 of the Notes to Consolidated Financial Statements in the Annual Report. The failure to collect all or a substantial portion of our remaining investment in the RBS Sempra Commodities partnership could have a corresponding impact on our cash flows, financial condition and results of operations.

Sempra Renewables and Sempra LNG & Midstream have provided guarantees related to joint venture financing agreements, and Sempra South American Utilities and Sempra Mexico have provided loans to joint ventures in which they have investments and to other affiliates. We discuss the guarantees in Note 4, and affiliate loans in Note 1 of the Notes to Consolidated Financial Statements in the Annual Report.

We have limited influence over these ventures and other businesses in which we do not have a controlling interest. In addition to the other risks inherent in these businesses, if their management were to fail to perform adequately or the other investors in the businesses were unable or otherwise failed to perform their obligations to provide capital and credit support for these businesses, it could have a material adverse effect on our results of operations, financial condition, cash flows and/or prospects. We discuss our investments further in Notes 3, 4 and 10 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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

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

As of December 31, 2016, Sempra Energy had approximately \$2.4 billion of goodwill, which represented approximately 4.9 percent of the total assets on its Consolidated Balance Sheet, primarily related to investments in Gasoductos de Chihuahua in Mexico, Chilquinta Energía in Chile and Luz Del Sur in Peru. Goodwill is not amortized, but we test it for impairment annually on October 1 or whenever events or changes in circumstances necessitate an evaluation, which could result in our recording a goodwill impairment loss. We discuss our annual goodwill impairment testing process and the factors considered in such testing in “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies and Estimates” and in Note 1 of the Notes to Consolidated Financial Statements in the Annual Report. A goodwill impairment loss could materially adversely affect our results of operations for the period in which such charge is recorded.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

SEMPRA UTILITIES

Electric Properties

SDG&E

At December 31, 2016, SDG&E owns and operates four natural gas-fired power plants:

- a 566-MW electric generation facility (the Palomar generation facility) in Escondido, California
- a 485-MW electric generation facility (the Desert Star generation facility) in Boulder City, Nevada
- a 96-MW electric generation peaking facility (the Miramar Energy Center) in San Diego, California
- a 47-MW electric generation facility (the Cuyamaca Peak Energy Plant) in El Cajon, California

SDG&E's interest in SONGS, as well as matters related to SONGS' retirement and related issues, are discussed in Note 13 of the Notes to Consolidated Financial Statements in the Annual Report.

At December 31, 2016, SDG&E's electric transmission and distribution facilities included substations and overhead and underground lines. These electric facilities are located in San Diego, Imperial and Orange counties of California, and in Arizona and Nevada. The facilities consist of 2,083 miles of transmission lines, 23,371 miles of distribution lines and 161 substations. Periodically, various areas of the service territory require expansion to accommodate customer growth, reliability and safety.

Sempra South American Utilities

Sempra South American Utilities operates Chilquinta Energía, which serves customers in the region of Valparaíso in central Chile. Its property consists of 10,118 miles of distribution lines, 352 miles of transmission lines and 48 substations. Chilquinta Energía and Sociedad Austral de Electricidad Sociedad Anónima are 50-percent partners in Eletrans S.A., an electric transmission company that operates a 100-mile double circuit 220-kV transmission line, which extends from Cardones to Diego de Almagro in Chile.

Sempra South American Utilities operates Luz del Sur, which serves customers in the southern zone of metropolitan Lima, Peru. Its property consists of 13,763 miles of distribution lines, 194 miles of transmission lines and 39 substations. Luz del Sur operates Santa Teresa, a 100-MW hydroelectric power plant located in the Cusco region of Peru.

Natural Gas Properties

SDG&E

At December 31, 2016, SDG&E's natural gas facilities consisted of one compressor station, 168 miles of transmission pipelines, 8,647 miles of distribution pipelines and 6,457 miles of service pipelines.

SoCalGas

At December 31, 2016, SoCalGas' natural gas facilities included 2,964 miles of transmission and storage pipelines, 50,296 miles of distribution pipelines and 47,676 miles of service pipelines. They also included 10 transmission compressor stations and four underground natural gas storage reservoirs with a combined working capacity of 137 Bcf. We discuss recent events concerning SoCalGas' Aliso Canyon natural gas storage facility in "Risk Factors" above and in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Factors Influencing Future Performance" and Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

SEMPRA INFRASTRUCTURE

Energy Properties

At December 31, 2016, Sempra Mexico and Sempra Renewables operate or own interests in a power plant and/or renewable generation facilities in North America with a total capacity of 3,329 MW. Our share of this capacity is 2,345 MW. We provide additional information in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in Notes 3 and 4 of the Notes to Consolidated Financial Statements in the Annual Report.

At December 31, 2016, Sempra Mexico’s operations included 2,336 miles of natural gas distribution pipelines, 710 miles of natural gas transmission pipelines and eight compressor stations, 140 miles of ethane pipelines and 118 miles of liquid petroleum gas pipelines. Sempra Mexico operates its Energía Costa Azul LNG regasification terminal on land it owns in Baja California, Mexico and operates a liquid petroleum gas storage terminal in Jalisco, Mexico.

Sempra Renewables leases properties in Nevada and Michigan and owns property in California, Arizona and Michigan for potential development and/or for currently operating solar and wind electric generation facilities and intermittency solutions. Sempra Mexico leases properties in Mexico for current and potential development of solar and wind electric generation facilities.

Sempra LNG & Midstream and its partner, ProLiance Transportation and Storage, LLC, own land in Cameron Parish, Louisiana, with potential to develop 19 Bcf of salt cavern natural gas storage capacity at the LA Storage development project.

In Washington County, Alabama, Sempra LNG & Midstream operates a 20 Bcf natural gas storage facility, Bay Gas, under a land lease. Sempra LNG & Midstream also owns land in Simpson County, Mississippi, on which it operates a 22 Bcf natural gas storage facility, Mississippi Hub. We will evaluate additional cavern and associated pipeline expansion opportunities at Bay Gas and Mississippi Hub based on regional market demand for natural gas storage services.

Sempra LNG & Midstream owns land in Port Arthur, Texas, for potential LNG liquefaction development. Sempra LNG & Midstream also has an equity interest in Cameron LNG JV, which owns land and an LNG regasification terminal and has a land lease in Hackberry, Louisiana. The joint venture is constructing an LNG liquefaction terminal at the facility.

OTHER PROPERTIES

Sempra Energy occupies its 16-story corporate headquarters building in San Diego, California, pursuant to a 25-year, build-to-suit lease that expires in 2040. The lease has five five-year renewal options. We discuss the details of this lease further in Note 15 of the Notes to Consolidated Financial Statements in the Annual Report.

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

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

Sempra South American Utilities owns or leases office facilities at various locations in Chile and Peru, with the leases ending from 2017 to 2021. Sempra Infrastructure owns or leases office facilities at various locations in the United States and Mexico, with the leases ending from 2017 to 2021.

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

ITEM 3. LEGAL PROCEEDINGS

We are not party to, and our property is not the subject of, any material pending legal proceedings (other than ordinary routine litigation incidental to our businesses) except for the matters (1) described in Notes 13, 14 and 15 of the Notes to Consolidated Financial Statements in the Annual Report, or (2) referred to in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II.

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

COMMON STOCK AND RELATED SHAREHOLDER MATTERS

The common stock, related shareholder, and dividend restriction information required by Item 5 is included in "Common Stock Data" in the Annual Report.

SEMPRA ENERGY EQUITY COMPENSATION PLANS

Sempra Energy has a long-term incentive plan that permits the grant of a wide variety of equity and equity-based incentive awards to directors, officers and key employees. At December 31, 2016, outstanding awards consisted of stock options and restricted stock units held by 434 employees.

The following table sets forth information regarding our equity compensation plan at December 31, 2016.

EQUITY COMPENSATION PLAN			
	Number of shares to be issued upon exercise of outstanding options, warrants and rights(1)	Weighted-average exercise price of outstanding options, warrants and rights(2)	Number of additional shares remaining available for future issuance(3)
Equity compensation plan approved by shareholders:			
2013 Long-Term Incentive Plan	2,620,313	\$ 52.46	5,627,118

(1) Consists of 360,255 options to purchase shares of our common stock, all of which were granted at an exercise price of 100% of the grant date fair market value of the shares subject to the option, 1,954,322 performance-based restricted stock units and 305,736 restricted stock units that are service-based or issued in connection with certain other criteria. Each performance-based restricted stock unit represents the right to receive from zero to 1.5 shares (2.0 shares for awards granted during or after 2014) of our common stock if applicable performance conditions are satisfied. The 2,620,313 shares also includes awards granted under two previously shareholder-approved long-term incentive plans (Predecessor Plans). No new awards may be granted under these Predecessor Plans.

(2) Represents only the weighted-average exercise price of the 360,255 outstanding options to purchase shares of common stock.

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

We provide additional discussion of share-based compensation in Note 8 of the Notes to Consolidated Financial Statements in the Annual Report.

PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

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

We also may, from time to time, purchase shares of our common stock from long-term incentive plan participants who elect to sell a sufficient number of vesting restricted shares to meet minimum statutory tax withholding requirements.

ITEM 6. SELECTED FINANCIAL DATA

The information required by Item 6 is included in “Five-Year Summaries” in the Annual Report.

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

The information required by Item 7 is set forth in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Annual Report, on pages 2 through 75.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by Item 7A is set forth in “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Market Risk” in the Annual Report.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by Item 8 is set forth on pages 86 through 219 of the Annual Report. Item 15(a)1 of Part IV of this report includes a listing of financial statements included.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

The information required by Item 9A is provided in “Controls and Procedures” in the Annual Report.

ITEM 9B. OTHER INFORMATION

None.

PART III.

Because SDG&E meets the conditions of General Instructions I(1)(a) and (b) of Form 10-K and is therefore filing this report with a reduced disclosure format as permitted by General Instruction I(2), the information required by Items 10, 11, 12 and 13 below is not required for SDG&E. We have, however, provided the information required by Item 10 with respect to SDG&E's executive officers in Part I, Item 1. Business in "Executive Officers of the Registrants – Executive Officers of SDG&E."

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

SEMPRA ENERGY

We provide the information required by Item 10 with respect to executive officers for Sempra Energy in Part I, Item 1. Business in "Executive Officers of the Registrants – Executive Officers of Sempra Energy." All other information required by Item 10 is incorporated by reference from "Corporate Governance" and "Share Ownership" in the Proxy Statement prepared for the May 2017 annual meeting of shareholders.

SOCALGAS

We provide the information required by Item 10 with respect to executive officers for SoCalGas in Part I, Item 1. Business in "Executive Officers of the Registrants – Executive Officers of SoCalGas." All other information required by Item 10 is incorporated by reference from the company's Information Statement prepared for its May 2017 annual meeting of shareholders.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from "Corporate Governance" and "Executive Compensation," including "Compensation Discussion and Analysis" and "Compensation Committee Report" in the Proxy Statement prepared for the May 2017 annual meeting of shareholders for Sempra Energy and from the Information Statement prepared for the May 2017 annual meeting of shareholders for SoCalGas.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

Information regarding securities authorized for issuance under equity compensation plans as required by Item 12 is included in Item 5.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The security ownership information required by Item 12 is incorporated by reference from "Share Ownership" in the Proxy Statement prepared for the May 2017 annual meeting of shareholders for Sempra Energy and in the Information Statement prepared for the May 2017 annual meeting of shareholders for SoCalGas.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from "Corporate Governance" in the Proxy Statement prepared for the May 2017 annual meeting of shareholders for Sempra Energy and from the Information Statement prepared for the May 2017 annual meeting of shareholders for SoCalGas.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accountant fees and services, as required by Item 14, is presented below for Sempra Energy, SDG&E and SoCalGas. The following table shows the fees paid to Deloitte & Touche LLP, the independent registered public accounting firm for Sempra Energy, SDG&E and SoCalGas, for services provided for 2016 and 2015.

PRINCIPAL ACCOUNTANT FEES

(Dollars in thousands)

	Sempra Energy Consolidated		SDG&E		SoCalGas	
	Fees	Percent of total	Fees	Percent of total	Fees	Percent of total
2016:						
Audit fees:						
Consolidated financial statements and internal controls audits, subsidiary and statutory audits	\$ 9,525		\$ 2,513		\$ 2,627	
Regulatory filings and related services	117		31		31	
Total audit fees	9,642	88%	2,544	90%	2,658	83%
Audit-related fees:						
Employee benefit plan audits	460		138		240	
Other audit-related services, accounting consultation	706		12		304	
Total audit-related fees	1,166	11	150	5	544	17
Tax planning and compliance fees	175	1	143	5	—	—
All other fees	15	—	3	—	—	—
Total fees	\$ 10,998	100%	\$ 2,840	100%	\$ 3,202	100%
2015:						
Audit fees:						
Consolidated financial statements and internal controls audits, subsidiary and statutory audits(1)	\$ 11,269		\$ 2,430		\$ 2,516	
Regulatory filings and related services	200		58		59	
Total audit fees	11,469	91%	2,488	89%	2,575	87%
Audit-related fees:						
Employee benefit plan audits	430		134		218	
Other audit-related services, accounting consultation	229		32		95	
Total audit-related fees	659	5	166	6	313	11
Tax planning and compliance fees	440	4	140	5	54	2
All other fees	46	—	8	—	9	—
Total fees	\$ 12,614	100%	\$ 2,802	100%	\$ 2,951	100%

(1) Sempra Energy Consolidated includes \$1.8 million of audit services relating to a confidential submission of a subsidiary's Form S-1 to the Securities and Exchange Commission for the formation of a master limited partnership and initial public offering, which have been indefinitely suspended.

The Audit Committee of Sempra Energy's board of directors is directly responsible for the appointment, compensation, retention and oversight of the independent registered public accounting firm for Sempra Energy and its subsidiaries, including SDG&E and SoCalGas. As a matter of good corporate governance, the SDG&E and SoCalGas boards of directors also reviewed the performance of Deloitte & Touche LLP and concurred with the determination by the Sempra Energy Audit Committee to retain them as the independent registered public accounting firm for each of Sempra Energy, SDG&E and SoCalGas. Sempra Energy's board has determined that each member of its Audit Committee is an independent director and is financially literate, and that Mr. Taylor, the chair of the committee, is an audit committee financial expert as defined by the rules of the SEC.

Except where pre-approval is not required by SEC rules, Sempra Energy's Audit Committee pre-approves all audit and permissible non-audit services provided by Deloitte & Touche LLP for Sempra Energy and its subsidiaries. The committee's pre-approval policies and procedures provide for the general pre-approval of specific types of services and give detailed guidance to management as to the services that are eligible for general pre-approval. They require specific pre-approval of all other permitted services. For both types of pre-approval, the committee considers whether the services to be provided are consistent with maintaining the firm's independence. The policies and procedures also delegate authority to the chair of the committee to address any requests for pre-approval of services between committee meetings, with any pre-approval decisions to be reported to the committee at its next scheduled meeting.

PART IV.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. FINANCIAL STATEMENTS

	Page in Annual Report(1)		
	Sempra Energy	San Diego Gas & Electric Company	Southern California Gas Company
Consolidated Statements of Operations for the years ended December 31, 2016, 2015 and 2014	86	94	102
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2016, 2015 and 2014	87	95	103
Consolidated Balance Sheets at December 31, 2016 and 2015	88	96	104
Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014	90	98	106
Consolidated Statements of Changes in Equity for the years ended December 31, 2016, 2015 and 2014	92	100	N/A
Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2016, 2015 and 2014	N/A	N/A	107
Notes to Consolidated Financial Statements	109	109	109

(1) Incorporated by reference from the indicated pages of the 2016 Annual Report to Shareholders, filed as Exhibit 13.1

2. FINANCIAL STATEMENT SCHEDULES

Sempra Energy

Schedule I--Sempra Energy Condensed Financial Information of Parent may be found on page 60 of this report.

Any other schedule for which provision is made in Regulation S-X is not required under the instructions contained therein, is inapplicable or the information is included in the Consolidated Financial Statements and Notes thereto in the Annual Report.

3. EXHIBITS

See Exhibit Index on page 70 of this report.

CONSENTS OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM AND REPORT ON SCHEDULE

SEMPRA ENERGY

To the Board of Directors and Shareholders of Sempra Energy:

We consent to the incorporation by reference in Registration Statement No. 333-198572 on Form S-3 and Nos. 333-200828, 333-188526, 333-182225, 333-56161, 333-50806, 333-49732, 333-121073, 333-151184, 333-155191 and 333-129774 on Form S-8 of our reports dated February 28, 2017, relating to the consolidated financial statements of Sempra Energy and subsidiaries (the “Company”), and the effectiveness of the Company’s internal control over financial reporting, incorporated by reference in this Annual Report on Form 10-K of Sempra Energy for the year ended December 31, 2016.

Our audits of the financial statements referred to in our aforementioned report relating to the consolidated financial statements also included the financial statement schedule of the Company, listed in Item 15. This financial statement schedule is the responsibility of the Company’s management. Our responsibility is to express an opinion based on our audits. In our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ 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 consent to the incorporation by reference in Registration Statement No. 333-205410 on Form S-3 of our reports dated February 28, 2017, relating to the consolidated financial statements of San Diego Gas & Electric Company (the “Company”), and the effectiveness of the Company’s internal control over financial reporting, incorporated by reference in this Annual Report on Form 10-K of San Diego Gas & Electric Company for the year ended December 31, 2016.

/s/ 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 consent to the incorporation by reference in Registration Statement No. 333-205950 on Form S-3 of our reports dated February 28, 2017, relating to the financial statements of Southern California Gas Company (the “Company”), and the effectiveness of the Company’s internal control over financial reporting, incorporated by reference in this Annual Report on Form 10-K of Southern California Gas Company for the year ended December 31, 2016.

/s/ DELOITTE & TOUCHE LLP

San Diego, California
February 28, 2017

SCHEDULE I – SEMPRA ENERGY CONDENSED FINANCIAL INFORMATION OF PARENT

SEMPRA ENERGY
CONDENSED STATEMENTS OF OPERATIONS

(Dollars in millions, except per share amounts)

	Years ended December 31,		
	2016	2015	2014
Interest expense	\$ (277)	\$ (261)	\$ (235)
Operation and maintenance	(81)	(66)	(78)
Other (expense) income, net	(2)	7	50
Income tax benefit	181	150	133
Loss before equity in earnings of subsidiaries	(179)	(170)	(130)
Equity in earnings of subsidiaries, net of income taxes	1,549	1,519	1,291
Net income/earnings	\$ 1,370	\$ 1,349	\$ 1,161
Basic earnings per common share	\$ 5.48	\$ 5.43	\$ 4.72
Weighted-average number of shares outstanding (thousands)	250,217	248,249	245,891
Diluted earnings per common share	\$ 5.46	\$ 5.37	\$ 4.63
Weighted-average number of shares outstanding (thousands)	251,155	250,923	250,655

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in millions)

	Years ended December 31,		
	Pretax amount	Income tax benefit	Net-of-tax amount
2016:			
Net income	\$ 1,189	\$ 181	\$ 1,370
Other comprehensive income (loss):			
Foreign currency translation adjustments	42	—	42
Financial instruments	(6)	11	5
Pension and other postretirement benefits	(13)	4	(9)
Total other comprehensive income	23	15	38
Comprehensive income	\$ 1,212	\$ 196	\$ 1,408
2015:			
Net income	\$ 1,199	\$ 150	\$ 1,349
Other comprehensive income (loss):			
Foreign currency translation adjustments	(260)	—	(260)
Financial instruments	(80)	33	(47)
Pension and other postretirement benefits	(3)	1	(2)
Total other comprehensive loss	(343)	34	(309)
Comprehensive income	\$ 856	\$ 184	\$ 1,040
2014:			
Net income	\$ 1,028	\$ 133	\$ 1,161
Other comprehensive income (loss):			
Foreign currency translation adjustments	(193)	—	(193)
Financial instruments	(106)	42	(64)
Pension and other postretirement benefits	(20)	8	(12)
Total other comprehensive loss	(319)	50	(269)
Comprehensive income	\$ 709	\$ 183	\$ 892

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED BALANCE SHEETS

(Dollars in millions)

	December 31, 2016	December 31, 2015
Assets:		
Cash and cash equivalents	\$ 12	\$ 4
Due from affiliates	73	62
Other current assets	2	4
Total current assets	<u>87</u>	<u>70</u>
Investments in subsidiaries	17,329	15,586
Due from affiliates	—	457
Deferred income taxes	2,570	2,188
Other assets	592	641
Total assets	<u>\$ 20,578</u>	<u>\$ 18,942</u>
Liabilities and shareholders' equity:		
Current portion of long-term debt	\$ 600	\$ 752
Due to affiliates	359	332
Income taxes payable	153	42
Other current liabilities	374	310
Total current liabilities	<u>1,486</u>	<u>1,436</u>
Long-term debt	5,100	5,195
Due to affiliates	517	—
Other long-term liabilities	524	502
Shareholders' equity	12,951	11,809
Total liabilities and shareholders' equity	<u>\$ 20,578</u>	<u>\$ 18,942</u>

See Notes to Condensed Financial Information of Parent.

SEMPRA ENERGY
CONDENSED STATEMENTS OF CASH FLOWS

(Dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Net cash used in operating activities	\$ (178)	\$ (255)	\$ (260)
Dividends received from subsidiaries	175	350	300
Expenditures for property, plant and equipment	(5)	(43)	(15)
Purchase of trust assets	—	(5)	(4)
Decrease (increase) in loans to affiliates, net	457	(457)	627
Cash provided by (used in) investing activities	627	(155)	908
Common stock dividends paid	(686)	(628)	(598)
Issuances of common stock	51	52	56
Repurchases of common stock	(56)	(74)	(38)
Issuances of long-term debt	499	1,248	499
Payments on long-term debt	(750)	—	(800)
Increase (decrease) in loans from affiliates, net	504	(230)	234
Tax benefit related to share-based compensation	—	52	—
Other	(3)	(9)	(4)
Cash (used in) provided by financing activities	(441)	411	(651)
Increase (decrease) in cash and cash equivalents	8	1	(3)
Cash and cash equivalents, January 1	4	3	6
Cash and cash equivalents, December 31	\$ 12	\$ 4	\$ 3
SUPPLEMENTAL DISCLOSURE OF NONCASH FINANCING ACTIVITIES			
Financing of build-to-suit property	\$ —	\$ 61	\$ 61
Common dividends issued in stock	53	55	42
Dividends declared but not paid	189	174	163

See Notes to Condensed Financial Information of Parent.

NOTES TO CONDENSED FINANCIAL INFORMATION OF PARENT

Note 1. Basis of Presentation

Sempra Energy accounts for the earnings of its subsidiaries under the equity method in this unconsolidated financial information.

Other Income, Net, on the Condensed Statements of Operations includes \$23 million, \$3 million and \$27 million of gains on dedicated assets in support of our executive retirement and deferred compensation plans in 2016, 2015 and 2014, respectively.

Because of its nature as a holding company, Sempra Energy Parent classifies dividends received from subsidiaries as an investing cash flow.

Note 2. New Accounting Standards

We describe below recent pronouncements that have had or may have a significant effect on Sempra Energy Parent's financial condition, results of operations, cash flows or disclosures.

Accounting Standards Update (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 accounting principles generally accepted in the United States of America (U.S. GAAP), other than certain changes to align lessor accounting to specific changes made to lessee accounting and ASU 2014-09, "Revenue from Contracts with Customers." 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 2016-09, "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 Parent recognized a cumulative-effect adjustment to retained earnings and a deferred tax asset as of January 1, 2016 of \$49 million for previously unrecognized excess tax benefits from share-based compensation.
- Sempra Energy Parent recognized earnings consisting of excess tax benefits on the Condensed Statements of Operations of \$17 million in the year ended December 31, 2016, all of which related to the three months ended March 31, 2016. Excess tax benefits of \$34 million were previously recorded in Sempra Energy Parent Shareholders' Equity in Common Stock prior to adoption of ASU 2016-09.
- The excess tax benefits from share-based compensation for Sempra Energy Parent were previously classified as a financing activity on Sempra Energy Parent's Condensed Statement of Cash Flows. As now required, excess tax benefits for Sempra Energy Parent are included in Cash Flows From Operating Activities on the Condensed Statements of Cash Flows for the year ended December 31, 2016. This amendment was adopted prospectively, and therefore, we have not adjusted the Condensed 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.

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 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. Long-Term Debt

The following table shows the detail and maturities of long-term debt outstanding:

LONG-TERM DEBT <i>(Dollars in millions)</i>	December 31, 2016	December 31, 2015
6.5% Notes June 1, 2016, including \$300 at variable rates after fixed-to-floating rate swaps effective January 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	137	136
	<u>5,734</u>	<u>5,984</u>
Current portion of long-term debt	(600)	(752)
Unamortized discount on long-term debt	(10)	(10)
Unamortized debt issuance costs	(24)	(27)
Total long-term debt	\$ 5,100	\$ 5,195

Excluding the build-to-suit lease and market value adjustments for interest rate swaps, maturities of long-term debt are \$600 million in 2017, \$500 million in 2018, \$1 billion in 2019, \$900 million in 2020 and \$2.6 billion thereafter.

Additional information on Sempra Energy's long-term debt is provided in Note 5 of the Notes to Consolidated Financial Statements in the Annual Report.

Note 4. Commitments and Contingencies

For contingencies and guarantees related to Sempra Energy, refer to Notes 4, 5 and 15 of the Notes to Consolidated Financial Statements in the Annual Report.

Sempra Energy:**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SEMPRA ENERGY,
(Registrant)

By: /s/ Debra L. Reed

Debra L. Reed
Chairman and Chief Executive Officer

Date: February 28, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer: Debra L. Reed Chief Executive Officer	<u>/s/ Debra L. Reed</u>	February 28, 2017
Principal Financial Officer: J. Walker Martin Executive Vice President and Chief Financial Officer	<u>/s/ J. Walker Martin</u>	February 28, 2017
Principal Accounting Officer: Trevor I. Mihalik Senior Vice President, Controller and Chief Accounting Officer	<u>/s/ Trevor I. Mihalik</u>	February 28, 2017
Directors: Debra L. Reed, Chairman	<u>/s/ Debra L. Reed</u>	February 28, 2017
Alan L. Boeckmann, Director	<u>/s/ Alan L. Boeckmann</u>	February 28, 2017
Kathleen L. Brown, Director	<u>/s/ Kathleen L. Brown</u>	February 28, 2017
Pablo A. Ferrero, Director	<u>/s/ Pablo A. Ferrero</u>	February 28, 2017
William D. Jones, Director	<u>/s/ William D. Jones</u>	February 28, 2017
William G. Ouchi, Ph.D., Director	<u>/s/ William G. Ouchi</u>	February 28, 2017
William C. Rusnack, Director	<u>/s/ William C. Rusnack</u>	February 28, 2017
William P. Rutledge, Director	<u>/s/ William P. Rutledge</u>	February 28, 2017
Lynn Schenk, Director	<u>/s/ Lynn Schenk</u>	February 28, 2017
Jack T. Taylor, Director	<u>/s/ Jack T. Taylor</u>	February 28, 2017
James C. Yardley, Director	<u>/s/ James C. Yardley</u>	February 28, 2017

San Diego Gas & Electric Company:**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SAN DIEGO GAS & ELECTRIC COMPANY,
(Registrant)

By: /s/ Scott D. Drury

Scott D. Drury
President

Date: February 28, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934 (the Act), this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer:		
Scott D. Drury President	<u>/s/ Scott D. Drury</u>	February 28, 2017
Principal Financial and Accounting Officer:		
Bruce A. Folkmann Vice President, Controller, Chief Financial Officer and Chief Accounting Officer	<u>/s/ Bruce A. Folkmann</u>	February 28, 2017
Directors:		
Steven D. Davis, Non-Executive Chairman	<u>/s/ Steven D. Davis</u>	February 28, 2017
Scott D. Drury, Director	<u>/s/ Scott D. Drury</u>	February 28, 2017
J. Walker Martin, Director	<u>/s/ J. Walker Martin</u>	February 28, 2017
Trevor I. Mihalik, Director	<u>/s/ Trevor I. Mihalik</u>	February 28, 2017
G. Joyce Rowland, Director	<u>/s/ G. Joyce Rowland</u>	February 28, 2017
Caroline A. Winn, Director	<u>/s/ Caroline A. Winn</u>	February 28, 2017
Martha B. Wyrsh, Director	<u>/s/ Martha B. Wyrsh</u>	February 28, 2017

SUPPLEMENTAL INFORMATION TO BE FURNISHED WITH REPORTS FILED PURSUANT TO SECTION 15(d) OF THE ACT BY REGISTRANTS WHICH HAVE NOT REGISTERED SECURITIES PURSUANT TO SECTION 12 OF THE ACT:

No annual report, proxy statement, form of proxy or other soliciting material has been sent to security holders during the period covered by this Annual Report on Form 10-K, and no such materials are to be furnished to security holders subsequent to the filing of this Annual Report on Form 10-K.

Southern California Gas Company:**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOUTHERN CALIFORNIA GAS COMPANY,
(Registrant)

By: /s/ Patricia K. Wagner

Patricia K. Wagner
Chief Executive Officer

Date: February 28, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name/Title	Signature	Date
Principal Executive Officer: Patricia K. Wagner Chief Executive Officer	/s/ Patricia K. Wagner	February 28, 2017
Principal Financial and Accounting Officer: Bruce A. Folkmann Vice President, Controller, Chief Financial Officer and Chief Accounting Officer	/s/ Bruce A. Folkmann	February 28, 2017
Directors: Steven D. Davis, Non-Executive Chairman	/s/ Steven D. Davis	February 28, 2017
J. Bret Lane, Director	/s/ J. Bret Lane	February 28, 2017
J. Walker Martin, Director	/s/ J. Walker Martin	February 28, 2017
Trevor I. Mihalik, Director	/s/ Trevor I. Mihalik	February 28, 2017
G. Joyce Rowland, Director	/s/ G. Joyce Rowland	February 28, 2017
Patricia K. Wagner, Director	/s/ Patricia K. Wagner	February 28, 2017
Martha B. Wyrsh, Director	/s/ Martha B. Wyrsh	February 28, 2017

EXHIBIT INDEX

The exhibits filed under the Registration Statements, Proxy Statements and Forms 8-K, 10-K and 10-Q that are incorporated herein by reference were filed under Commission File Number 1-14201 (Sempra Energy), Commission File Number 1-40 (Pacific Lighting Corporation), Commission File Number 1-03779 (San Diego Gas & Electric Company) and/or Commission File Number 1-01402 (Southern California Gas Company).

The following exhibits relate to each registrant as indicated.

EXHIBIT 3 -- BYLAWS AND ARTICLES OF INCORPORATION

Sempra Energy

- 3.1 Amended and Restated Articles of Incorporation of Sempra Energy effective May 23, 2008 (Appendix B to the 2008 Sempra Energy Definitive Proxy Statement, filed on April 15, 2008).
- 3.2 Bylaws of Sempra Energy (as amended through December 15, 2015) (Sempra Energy Form 8-K filed on December 17, 2015, Exhibit 3.1).

San Diego Gas & Electric Company (SDG&E)

- 3.3 Amended and Restated Articles of Incorporation of San Diego Gas & Electric Company effective August 15, 2014 (2014 SDG&E Form 10-K, Exhibit 3.4).
- 3.4 Bylaws of San Diego Gas & Electric (as amended through October 26, 2016) (SDG&E September 30, 2016 Form 10-Q, Exhibit 3.1).

Southern California Gas Company (SoCalGas)

- 3.5 Restated Articles of Incorporation of Southern California Gas Company effective October 7, 1996 (1996 SoCalGas Form 10-K, Exhibit 3.01).
- 3.6 Bylaws of Southern California Gas Company (as amended through January 30, 2017) (SoCalGas Form 8-K filed on January 31, 2017, Exhibit 3.1).

EXHIBIT 4 -- INSTRUMENTS DEFINING THE RIGHTS OF SECURITY HOLDERS, INCLUDING INDENTURES

The companies agree to furnish a copy of each such instrument to the Commission upon request.

Sempra Energy

- 4.1 Description of rights of Sempra Energy Common Stock (Amended and Restated Articles of Incorporation of Sempra Energy effective May 23, 2008, Exhibit 3.1 above).
- 4.2 Indenture dated as of February 23, 2000, between Sempra Energy and U.S. Bank Trust National Association, as Trustee (Sempra Energy Registration Statement on Form S-3 (No. 333-153425), filed on September 11, 2008, Exhibit 4.1).

Southern California Gas Company

- 4.3 Description of preferences of Preferred Stock, Preference Stock and Series Preferred Stock (Southern California Gas Company Restated Articles of Incorporation, Exhibit 3.5 above).

Sempra Energy / San Diego Gas & Electric Company

- 4.4 Mortgage and Deed of Trust dated July 1, 1940 (SDG&E Registration Statement No. 2-4769, Exhibit B-3).
- 4.5 Second Supplemental Indenture dated as of March 1, 1948 (SDG&E Registration Statement No. 2-7418, Exhibit B-5B).

- 4.6 Ninth Supplemental Indenture dated as of August 1, 1968 (SDG&E Registration Statement No. 333-52150, Exhibit 4.5).
- 4.7 Tenth Supplemental Indenture dated as of December 1, 1968 (SDG&E Registration Statement No. 2-36042, Exhibit 2-K).
- 4.8 Sixteenth Supplemental Indenture dated August 28, 1975 (SDG&E Registration Statement No. 33-34017, Exhibit 4.2).

Sempra Energy / Southern California Gas Company

- 4.9 First Mortgage Indenture of Southern California Gas Company to American Trust Company dated October 1, 1940 (Registration Statement No. 2-4504 filed by Southern California Gas Company on September 16, 1940, Exhibit B-4).
- 4.10 Supplemental Indenture of Southern California Gas Company to American Trust Company dated as of August 1, 1955 (Registration Statement No. 2-11997 filed by Pacific Lighting Corporation on October 26, 1955, Exhibit 4.07).
- 4.11 Supplemental Indenture of Southern California Gas Company to American Trust Company dated as of December 1, 1956 (2006 Sempra Energy Form 10-K, Exhibit 4.09).
- 4.12 Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank dated as of June 1, 1965 (2006 Sempra Energy Form 10-K, Exhibit 4.10).
- 4.13 Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of August 1, 1972 (Registration Statement No. 2-59832 filed by Southern California Gas Company on September 6, 1977, Exhibit 2.19).
- 4.14 Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of May 1, 1976 (Registration Statement No. 2-56034 filed by Southern California Gas Company on April 14, 1976, Exhibit 2.20).
- 4.15 Supplemental Indenture of Southern California Gas Company to Wells Fargo Bank, National Association dated as of September 15, 1981 (Registration Statement No. 333-70654, Exhibit 4.24).

EXHIBIT 10 -- MATERIAL CONTRACTS

Sempra Energy / San Diego Gas & Electric Company / Southern California Gas Company

- 10.1 Form of Continental Forge and California Class Action Price Reporting Settlement Agreement dated as of January 4, 2006 (Form 8-K filed on January 5, 2006, Exhibit 99.1).

Sempra Energy / San Diego Gas & Electric Company

- 10.2 Amended and Restated Operating Order between San Diego Gas & Electric Company and the California Department of Water Resources effective March 10, 2011 (Sempra Energy March 31, 2011 Form 10-Q, Exhibit 10.4).
- 10.3 Amended and Restated Servicing Order between San Diego Gas & Electric Company and the California Department of Water Resources effective March 10, 2011 (Sempra Energy March 31, 2011 Form 10-Q, Exhibit 10.5).

Compensation

Sempra Energy / San Diego Gas & Electric Company / Southern California Gas Company

- 10.4 Form of Indemnification Agreement with Directors and Executive Officers (executed after January 2011) (Sempra Energy March 31, 2016 Form 10-Q, Exhibit 10.1).

- 10.5 Form of Sempra Energy Shared Services Executive Incentive Compensation Plan (2013 Sempra Energy Form 10-K, Exhibit 10.19).
- 10.6 Amended and Restated Sempra Energy 2013 Long-Term Incentive Plan (2015 Sempra Energy Form 10-K, Exhibit 10.5).
- 10.7 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Index.
- 10.8 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure - S&P 500 Utilities Index.
- 10.9 Form of Sempra Energy 2013 Long-Term Incentive Plan 2017 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure.
- 10.10 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (2015 Sempra Energy Form 10-K, Exhibit 10.6).
- 10.11 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (2015 Sempra Energy Form 10-K, Exhibit 10.7).
- 10.12 Form of Sempra Energy 2013 Long-Term Incentive Plan 2016 and 2017 Restricted Stock Unit Award (2015 Sempra Energy Form 10-K, Exhibit 10.8).
- 10.13 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (2014 Sempra Energy Form 10-K, Exhibit 10.19).
- 10.14 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (2014 Sempra Energy Form 10-K, Exhibit 10.20).
- 10.15 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Performance-Based Restricted Stock Unit Award - Cameron LNG and Cumulative Net Income (2014 Sempra Energy Form 10-K, Exhibit 10.21).
- 10.16 Form of Sempra Energy 2013 Long-Term Incentive Plan 2015 Restricted Stock Unit Award Agreement (2015 Sempra Energy Form 10-K, Exhibit 10.12).
- 10.17 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Restricted Stock Unit Award (Sempra Energy March 31, 2014 Form 10-Q, Exhibit 10.1).
- 10.18 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Performance-Based Restricted Stock Unit Award - EPS Growth Performance Measure (Sempra Energy March 31, 2014 Form 10-Q, Exhibit 10.2).
- 10.19 Form of Sempra Energy 2013 Long-Term Incentive Plan 2014 Performance-Based Restricted Stock Unit Award - Relative Total Shareholder Return Performance Measure (Sempra Energy March 31, 2014 Form 10-Q, Exhibit 10.3).
- 10.20 Sempra Energy 2008 Long Term Incentive Plan (Appendix A to the 2008 Sempra Energy Definitive Proxy Statement, filed on April 15, 2008).
- 10.21 Sempra Energy 2008 Long Term Incentive Plan for EnergySouth, Inc. Employees and Other Eligible Individuals (Registration Statement on Form S-8 Sempra Energy Registration Statement No. 333-155191 dated November 7, 2008, Exhibit 10.1).
- 10.22 Form of Sempra Energy 2008 Long-Term Incentive Plan 2013 Restricted Stock Unit Award Agreement (2015 Sempra Energy Form 10-K, Exhibit 10.19).
- 10.23 Form of Sempra Energy 2008 Long Term Incentive Plan, 2009 Nonqualified Stock Option Agreement (March 31, 2009 Sempra Energy Form 10-Q, Exhibit 10.2).

- 10.24 Form of Sempra Energy 2008 Long Term Incentive Plan, 2008 Nonqualified Stock Option Agreement (June 30, 2008 Sempra Energy Form 10-Q, Exhibit 10.4).
- 10.25 Amended and Restated Sempra Energy 1998 Long-Term Incentive Plan (June 30, 2003 Sempra Energy Form 10-Q, Exhibit 10.2).
- 10.26 Form of Sempra Energy 1998 Long Term Incentive Plan, 2008 Non-Qualified Stock Option Agreement (2007 Sempra Energy Form 10-K, Exhibit 10.10).
- 10.27 Amended and Restated Sempra Energy 2005 Deferred Compensation Plan, now known as Sempra Energy Employee and Director Retirement Savings Plan.
- 10.28 Amended and Restated Sempra Energy Deferred Compensation and Excess Savings Plan.
- 10.29 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective July 1, 2009 (2015 Sempra Energy Form 10-K, Exhibit 10.28).
- 10.30 First Amendment to the 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective February 11, 2010 (2015 Sempra Energy Form 10-K, Exhibit 10.29).
- 10.31 Second Amendment to the 2009 Amendment and Restatement of the Sempra Energy Supplemental Executive Retirement Plan effective January 1, 2014 (2014 Sempra Energy Form 10-K, Exhibit 10.43).
- 10.32 2015 Amendment and Restatement of the Sempra Energy Cash Balance Restoration Plan effective November 10, 2015 (2015 Sempra Energy Form 10-K, Exhibit 10.31).
- 10.33 Sempra Energy Amended and Restated Executive Life Insurance Plan (2012 Sempra Energy Form 10-K, Exhibit 10.22).
- 10.34 Sempra Energy Executive Personal Financial Planning Program Policy Document (September 30, 2004 Sempra Energy Form 10-Q, Exhibit 10.11).
- 10.35 Form of Indemnification Agreement with Directors and Executive Officers (June 30, 2008 Sempra Energy Form 10-Q, Exhibit 10.2).
- 10.36 Sempra Energy Amended and Restated Executive Medical Plan (2008 Sempra Energy Form 10-K, Exhibit 10.26).
- 10.37 Sempra Energy Employee Stock Ownership Plan and Trust Agreement effective January 1, 2001 (September 30, 2008 Sempra Energy Form 10-Q, Exhibit 10.1).

Sempra Energy

- 10.38 Sempra Energy Executive Incentive Plan effective January 1, 2003 (2002 Sempra Energy Form 10-K, Exhibit 10.09).
- 10.39 Severance Pay Agreement between Sempra Energy and Steven D. Davis, dated January 1, 2017.
- 10.40 Severance Pay Agreement between Sempra Energy and Trevor Mihalik, dated January 1, 2017.
- 10.41 Severance Pay Agreement between Sempra Energy and Jeffrey W. Martin, dated January 1, 2017.
- 10.42 Severance Pay Agreement between Sempra Energy and Dennis Arriola, dated January 1, 2017.
- 10.43 Amended and Restated Sempra Energy Severance Pay Agreement between Sempra Energy and Debra L. Reed (Sempra Energy Form 8-K filed on July 1, 2011, Exhibit 10.1).

- 10.44 Amendment to the Amended and Restated Severance Pay Agreement between Sempra Energy and Mark A. Snell (Sempra Energy Form 8-K filed on September 15, 2011, Exhibit 10.1).
- 10.45 Amended and Restated Sempra Energy Severance Pay Agreement between Sempra Energy and Mark A. Snell, dated November 4, 2008 (2014 Sempra Energy Form 10-K, Exhibit 10.53).
- 10.46 Severance Pay Agreement between Sempra Energy and Joseph A. Householder (Sempra Energy Form 8-K filed on September 15, 2011, Exhibit 10.2).
- 10.47 Severance Pay Agreement between Sempra Energy and Martha B. Wyrsh, dated September 3, 2013 (2013 Sempra Energy Form 10-K, Exhibit 10.57).
- 10.48 Severance Pay Agreement between Sempra Energy and G. Joyce Rowland (2011 Sempra Energy Form 10-K, Exhibit 10.26).
- 10.49 Form of Sempra Energy Non-Employee Directors' Restricted Stock Unit Award (2014 Sempra Energy Form 10-K, Exhibit 10.59).
- 10.50 Form of Sempra Energy 2008 Non-Employee Directors' Stock Plan, Nonqualified Stock Option Agreement (June 30, 2008 Sempra Energy Form 10-Q, Exhibit 10.5).
- 10.51 Form of Sempra Energy 1998 Non-Employee Directors' Stock Plan Non-Qualified Stock Option Agreement (2006 Sempra Energy Form 10-K, Exhibit 10.09).
- 10.52 Amendment and Restatement of Sempra Energy 1998 Non-Employee Directors' Stock Plan effective March 2, 1999 (2014 Sempra Energy Form 10-K, Exhibit 10.63).
- 10.53 Sempra Energy 1998 Non-Employee Directors' Stock Plan (Registration Statement on Form S-8 Sempra Energy Registration Statement No. 333-56161 dated June 5, 1998, Exhibit 4.2).
- 10.54 Sempra Energy Amended and Restated Sempra Energy Retirement Plan for Directors (June 30, 2008 Sempra Energy Form 10-Q, Exhibit 10.7).

Sempra Energy / San Diego Gas & Electric Company

- 10.55 Form of Sempra Energy and San Diego Gas & Electric Company Executive Incentive Compensation Plan (2013 Sempra Energy Form 10-K, Exhibit 10.64).
- 10.56 Severance Pay Agreement between Sempra Energy and James P. Avery, dated February 18, 2013 (Sempra Energy March 31, 2013 Form 10-Q, Exhibit 10.2).
- 10.57 Severance Pay Agreement between Sempra Energy and Erbin Keith, dated February 18, 2013 (Sempra Energy March 31, 2013 Form 10-Q, Exhibit 10.5).
- 10.58 Severance Pay Agreement between Sempra Energy and Scott D. Drury dated March 5, 2011.
- 10.59 Severance Pay Agreement between Sempra Energy and Caroline A. Winn dated April 3, 2010.

Sempra Energy / Southern California Gas Company

- 10.60 Form of Sempra Energy and Southern California Gas Company Executive Incentive Compensation Plan (2013 Sempra Energy Form 10-K, Exhibit 10.71).
- 10.61 Severance Pay Agreement between Sempra Energy and John C. Baker, dated February 18, 2013 (2014 Sempra Energy Form 10-K, Exhibit 10.67).
- 10.62 Severance Pay Agreement between Sempra Energy and Lee Schavrien, dated February 18, 2013 (Sempra Energy March 31, 2013 Form 10-Q, Exhibit 10.3).

- 10.63 Severance Pay Agreement between Sempra Energy and J. Bret Lane, dated August 4, 2012 (2013 Sempra Energy Form 10-K, Exhibit 10.72).
- 10.64 Severance Pay Agreement between Sempra Energy and Robert M. Schlax, dated January 17, 2014 (2013 Sempra Energy Form 10-K, Exhibit 10.66).
- 10.65 Severance Pay Agreement between Sempra Energy and Bruce Folkmann, dated August 4, 2012 (2015 Sempra Energy Form 10-K, Exhibit 10.63).
- 10.66 Severance Pay Agreement between Sempra Energy and Sharon L. Tomkins, dated August 30, 2014 (2015 Sempra Energy Form 10-K, Exhibit 10.64).
- 10.67 Severance Pay Agreement between Sempra Energy and Patricia K. Wagner dated January 1, 2014.

Nuclear

Sempra Energy / San Diego Gas & Electric Company

- 10.68 Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station, approved November 25, 1987 (1992 SDG&E Form 10-K, Exhibit 10.7).
- 10.69 Amendment No. 1 to the Qualified CPUC Decommissioning Master Trust Agreement dated September 22, 1994 (see Exhibit 10.68 above) (1994 SDG&E Form 10-K, Exhibit 10.56).
- 10.70 Second Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.68 above) (1994 SDG&E Form 10-K, Exhibit 10.57).
- 10.71 Third Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.68 above) (1996 SDG&E Form 10-K, Exhibit 10.59).
- 10.72 Fourth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.68 above) (1996 SDG&E Form 10-K, Exhibit 10.60).
- 10.73 Fifth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.68 above) (1999 SDG&E Form 10-K, Exhibit 10.26).
- 10.74 Sixth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.68 above) (1999 SDG&E Form 10-K, Exhibit 10.27).
- 10.75 Seventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated December 24, 2003 (see Exhibit 10.68 above) (2003 Sempra Energy Form 10-K, Exhibit 10.42).
- 10.76 Eighth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated October 12, 2011 (see Exhibit 10.68 above) (2011 SDG&E Form 10-K, Exhibit 10.70).
- 10.77 Ninth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 9, 2014 (see Exhibit 10.68 above) (2013 Sempra Energy Form 10-K, Exhibit 10.83).
- 10.78 Tenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.68 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.1).

- 10.79 Eleventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.68 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.2).
- 10.80 Twelfth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.68 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.3).
- 10.81 Thirteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 1, 2015 (see Exhibit 10.68 above) (Sempra Energy 2015 Form 10-K, Exhibit 10.78).
- 10.82 Fourteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated February 18, 2016 (see Exhibit 10.68 above) (Sempra Energy September 30, 2016 Form 10-Q, Exhibit 10.1).
- 10.83 Fifteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 31, 2016 (see Exhibit 10.68 above) (Sempra Energy September 30, 2016 Form 10-Q, Exhibit 10.2).
- 10.84 Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station, approved November 25, 1987 (1992 SDG&E Form 10-K, Exhibit 10.8).
- 10.85 First Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.84 above) (1996 SDG&E Form 10-K, Exhibit 10.62).
- 10.86 Second Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.84 above) (1996 SDG&E Form 10-K, Exhibit 10.63).
- 10.87 Third Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.84 above) (1999 SDG&E Form 10-K, Exhibit 10.31).
- 10.88 Fourth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station (see Exhibit 10.84 above) (1999 SDG&E Form 10-K, Exhibit 10.32).
- 10.89 Fifth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated December 24, 2003 (see Exhibit 10.84 above) (2003 Sempra Energy Form 10-K, Exhibit 10.48).
- 10.90 Sixth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated October 12, 2011 (see Exhibit 10.84 above) (2011 SDG&E Form 10-K, Exhibit 10.77).
- 10.91 Seventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 9, 2014 (see Exhibit 10.84 above) (2013 Sempra Energy Form 10-K, Exhibit 10.91).
- 10.92 Eighth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.84 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.4).
- 10.93 Ninth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.84 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.5).

- 10.94 Tenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 27, 2014 (see Exhibit 10.84 above) (Sempra Energy September 30, 2014 Form 10-Q, Exhibit 10.6).
- 10.95 Eleventh Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated January 1, 2015 (see Exhibit 10.84 above) (2015 Sempra Energy Form 10-K, Exhibit 10.90)
- 10.96 Twelfth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated February 18, 2016 (see Exhibit 10.84 above) (Sempra Energy September 30, 2016 Form 10-Q, Exhibit 10.3).
- 10.97 Thirteenth Amendment to the San Diego Gas & Electric Company Nuclear Facilities Non-Qualified CPUC Decommissioning Master Trust Agreement for San Onofre Nuclear Generating Station dated August 31, 2016 (see Exhibit 10.84 above) (Sempra Energy September 30, 2016 Form 10-Q, Exhibit 10.4).
- 10.98 U. S. Department of Energy contract for disposal of spent nuclear fuel and/or high-level radioactive waste, entered into between the DOE and Southern California Edison Company, as agent for SDG&E and others; Contract DE-CR01-83NE44418, dated June 10, 1983 (1988 SDG&E Form 10-K, Exhibit 10N).

EXHIBIT 12 -- STATEMENTS RE: COMPUTATION OF RATIOS

Sempra Energy

- 12.1 Sempra Energy Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends for the years ended December 31, 2016, 2015, 2014, 2013 and 2012.

San Diego Gas & Electric Company

- 12.2 San Diego Gas & Electric Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends for the years ended December 31, 2016, 2015, 2014, 2013 and 2012.

Southern California Gas Company

- 12.3 Southern California Gas Company Computation of Ratio of Earnings to Combined Fixed Charges and Preferred Stock Dividends for the years ended December 31, 2016, 2015, 2014, 2013, and 2012.

EXHIBIT 13 -- ANNUAL REPORT TO SECURITY HOLDERS

Sempra Energy / San Diego Gas & Electric Company / Southern California Gas Company

- 13.1 Sempra Energy 2016 Annual Report to Shareholders. (Such report, except for the portions thereof which are expressly incorporated by reference in this Annual Report, is furnished for the information of the Securities and Exchange Commission and is not to be deemed “filed” as part of this Annual Report).

EXHIBIT 14 -- CODE OF ETHICS

San Diego Gas & Electric Company / Southern California Gas Company

- 14.1 Sempra Energy Code of Business Conduct and Ethics for Board of Directors and Senior Officers (also applies to directors and officers of San Diego Gas & Electric Company and Southern California Gas Company) (2006 SDG&E and SoCalGas Forms 10-K, Exhibit 14.01).

EXHIBIT 21 -- SUBSIDIARIES

Sempra Energy

- 21.1 Sempra Energy Schedule of Certain Subsidiaries at December 31, 2016.

EXHIBIT 23 -- CONSENTS OF EXPERTS AND COUNSEL

- 23.1 Consents of Independent Registered Public Accounting Firm and Report on Schedule, pages 57 through 59.

EXHIBIT 31 -- SECTION 302 CERTIFICATIONS

Sempra Energy

- 31.1 Statement of Sempra Energy's Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.2 Statement of Sempra Energy's Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

San Diego Gas & Electric Company

- 31.3 Statement of San Diego Gas & Electric Company's Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.4 Statement of San Diego Gas & Electric Company's Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

Southern California Gas Company

- 31.5 Statement of Southern California Gas Company's Chief Executive Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.
- 31.6 Statement of Southern California Gas Company's Chief Financial Officer pursuant to Rules 13a-14 and 15d-14 of the Securities Exchange Act of 1934.

EXHIBIT 32 -- SECTION 906 CERTIFICATIONS

Sempra Energy

- 32.1 Statement of Sempra Energy's Chief Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.2 Statement of Sempra Energy's Chief Financial Officer pursuant to 18 U.S.C. Sec. 1350.

San Diego Gas & Electric Company

- 32.3 Statement of San Diego Gas & Electric Company's Chief Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.4 Statement of San Diego Gas & Electric Company's Chief Financial Officer pursuant to 18 U.S.C. Sec. 1350.

Southern California Gas Company

- 32.5 Statement of Southern California Gas Company's Chief Executive Officer pursuant to 18 U.S.C. Sec. 1350.
- 32.6 Statement of Southern California Gas Company's Chief Financial Officer pursuant to 18 U.S.C. Sec. 1350.

EXHIBIT 101 -- INTERACTIVE DATA FILE

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

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GLOSSARY

AB	Assembly Bill	ISO	Independent System Operator
Annual Report	2016 Annual Report to Shareholders	kV	Kilovolt
ASU	Accounting Standards Update	kW	Kilowatt
Bay Gas	Bay Gas Storage Company, Ltd.	LA Storage	LA Storage, LLC
Bcf	Billion cubic feet (of natural gas)	LNG	Liquefied natural gas
California Utilities	San Diego Gas & Electric Company and Southern California Gas Company	Luz del Sur	Luz del Sur S.A.A. and its subsidiaries
Cameron LNG JV	Cameron LNG Holdings, LLC	Mississippi Hub	Mississippi Hub, LLC
CARB	California Air Resources Board	Mtpa	Million tonnes per annum
CCA	Community Choice Aggregation	MW	Megawatt
CDEC	Centros de Despacho Económico de Carga (Centers for Economic Load Dispatch) (Chile)	MWh	Megawatt hours
CDEC-SIC	Sistema Interconectado Central (Central Interconnected System) (Chile)	NAFTA	North American Free Trade Agreement
CEC	California Energy Commission	NEM	Net energy metering
CFE	Comisión Federal de Electricidad	NRC	Nuclear Regulatory Commission
Chilquinta Energía	Chilquinta Energía S.A. and its subsidiaries	OSINERGMIN	Organismo Supervisor de la Inversión en Energía y Minería (Energy and Mining Investment Supervisory Body) (Peru)
CNBV	Comisión Nacional Bancaria y de Valores (Mexican National Banking and Securities Commission)	PEMEX	Petróleos Mexicanos (Mexican state-owned oil company)
CPUC	California Public Utilities Commission	PG&E	Pacific Gas and Electric Company
CRE	Comisión Reguladora de Energía (Energy Regulatory Commission) (Mexico)	PHMSA	Pipeline and Hazardous Materials Safety Administration
DOE	U.S. Department of Energy	PSEP	Pipeline Safety Enhancement Plan
DOGGR	California Department of Conservation's Division of Oil, Gas, and Geothermal Resources	QF	Qualifying Facility
DOT	U.S. Department of Transportation	RBS Sempra Commodities	RBS Sempra Commodities LLP
DPH	Los Angeles County Department of Public Health	RPS	Renewables Portfolio Standard
Edison	Southern California Edison Company	SB	Senate Bill
EPA	U.S. Environmental Protection Agency	SCAQMD	South Coast Air Quality Management District
EPC	Engineering, procurement and construction	SDG&E	San Diego Gas & Electric Company
EPS	Earnings per common share	SDWA	Safe Drinking Water Act
ERR	Eligible Renewable Energy Resource	SEC	Securities and Exchange Commission
FERC	Federal Energy Regulatory Commission	SEIN	Sistema Eléctrico Interconectado Nacional (Peruvian national interconnected system)
FPA	Federal Power Act	SMV	Superintendencia del Mercado de Valores (Superintendency of Securities Market) (Peru)
FTA	Free Trade Agreement	SoCalGas	Southern California Gas Company
GHG	Greenhouse gas	SONGS	San Onofre Nuclear Generating Station
The Governor's Order	Proclamation of a State of Emergency, by the Governor of the State of California, dated January 6, 2016	The board	Sempra Energy's board of directors
IEnova	Infraestructura Energética Nova, S.A.B. de C.V.	TURN	The Utility Reform Network
IOU	Investor-owned utility	VIE	Variable interest entity
IRS	Internal Revenue Service	U.S. GAAP	Accounting principles generally accepted in the United States of America

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