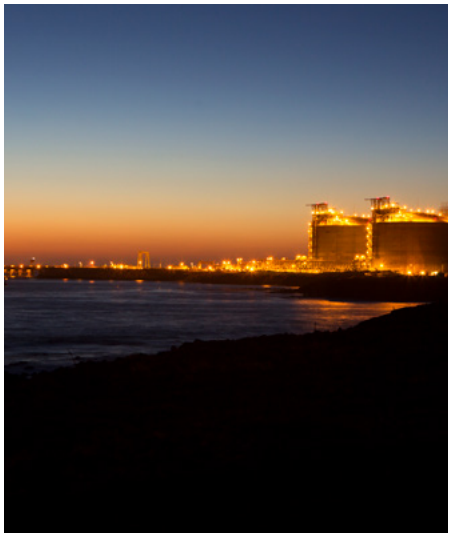
Sempra Energy®

SUSTAINABLE GROWTH

2016 CORPORATE RESPONSIBILITY REPORT

Contents



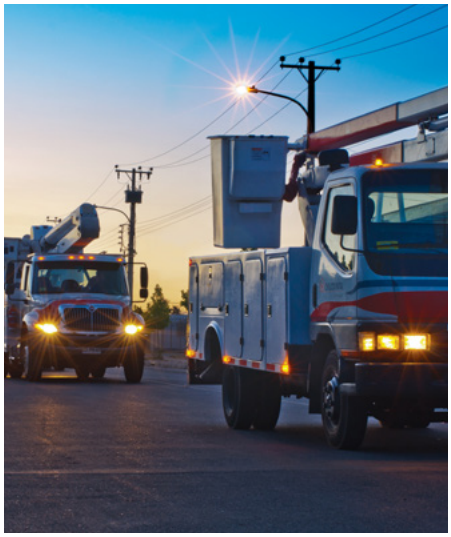
Letter from our chairman, president and CEO 3

Our business 4

Year in review 4
Strategy and assets 9
Governance 12
Risk management 18

The environment 22

Climate change 22
Emissions 30
Water 38
Waste and recycling 40
Environmental compliance 42
Biodiversity 43
Supply chain impacts 44



Our stakeholders 46

Employees 46
Customers and communities 54
Business partners and suppliers 60
Regulators 61
Investors and shareholders 61

About this report 62

Report overview 62
Performance data 64
Goals & results 65
Disclaimers 68
GRI index 71
Content index 85

Please consider the environment before printing. This document is accurate as of June 15, 2017. See sempra.com for the most up-to-date version.

The 470-megawatt Flat Ridge 2 wind farm near Wichita, Kan. , as shown on the cover.

Letter from our chairman, president and CEO

The roots of our company date back well over a century. Over time, we have grown and flourished by delivering safe, reliable and affordable energy to our customers.

While this is our core mission, we must do more. We must look to secure not only the sufficient energy resources, but also the public support, market demand and skilled employees we need.

This approach benefits both our business and our stakeholders.

- We minimize our environmental footprint. Our power generation emissions rate is roughly half the U.S. national average.
- We operate efficiently. In 2016, fresh water represented just 1 percent of our total water withdrawal.
- We evaluate potential projects based on a rigorous assessment of market trends. Most of our infrastructure assets are under contract for 20 years or longer.
- We respect our employees and their ideas. This report contains numerous examples of employee-driven innovation.
- We strive to improve our performance in a wide range of areas including safety, reliability, diversity, energy efficiency and customer satisfaction. As a result, independent third parties continue to rank our company high on their indexes and scorecards.

By the year 2050, experts believe that there will be nearly 10 billion people living on our planet. They will need water to drink, food to eat, clean air to breathe, jobs to support their families – and energy to power their lives. We are building a company today that will help meet the energy needs of future generations.

This is what we mean by "sustainable growth."

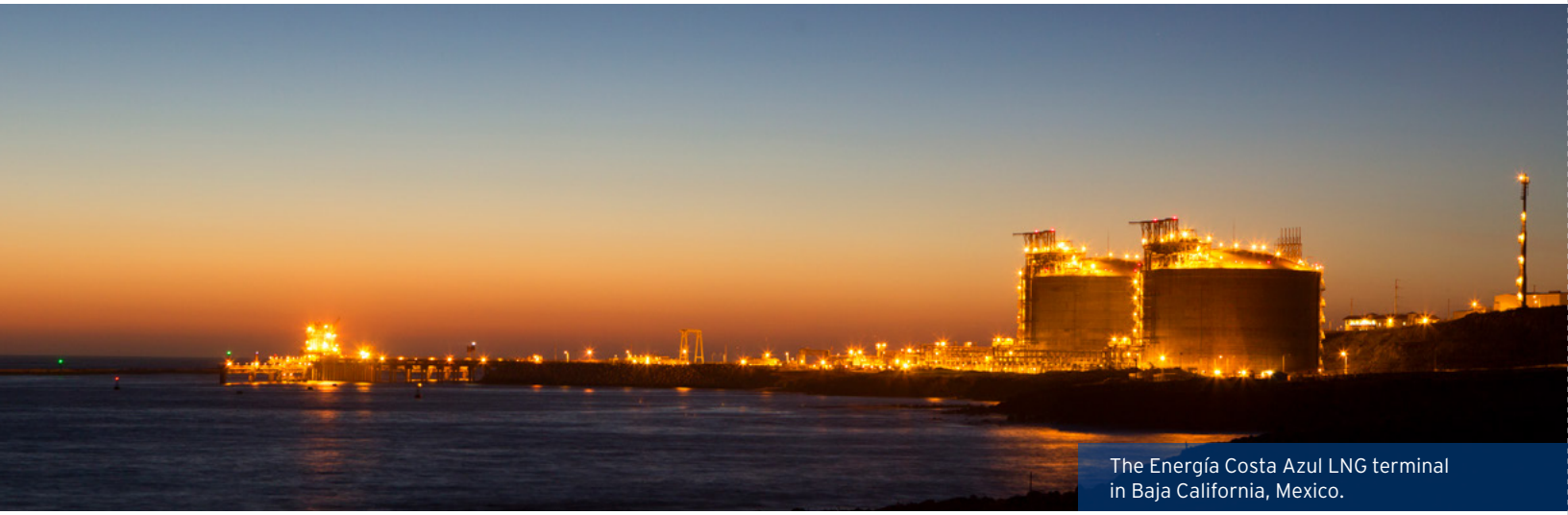
I welcome your comments and ideas as we continue our journey.

Debra L. Reed
Chairman, President and CEO

Note: Our chairman, president and CEO's "Letter to Shareholders" in our 2016 Annual Report and the video "Balanced Growth" provide additional detail on our vision and strategic priorities.

"We are building a company today that will help meet the energy needs of future generations."

Our business



The Energía Costa Azul LNG terminal in Baja California, Mexico.

Year in review 4

Strategy and assets 9

- Sempra Utilities
- Sempra Infrastructure

Governance 12

- Board of directors
- Shareholder engagement
- Values and code of conduct
- Political involvement

Risk management 18

- Key risks
- Risk management process
- Compliance and management systems
- Supplier selection and monitoring

Year in review

In 2016, Sempra Energy® met key financial and operational targets while recording earnings of $1.37 billion on revenues of $10.2 billion.

In January, after more than a year and a half of construction activities, the Cameron LNG liquefaction project team erected structural steel for the first of three liquefaction trains. This massive construction project – the largest in our history – has an expected in-service date of mid-2018 for the first train and mid-2019 for all three trains.

The California Public Utilities Commission (CPUC) voted to maintain the state's existing net energy metering program, a billing mechanism that credits owners of solar-power systems for the electricity they produce for the regional grid. San Diego Gas & Electric (SDG&E®) expressed concern with the program, which shifts the cost of maintaining the electrical grid to non-solar-owning customers, many of whom have lower incomes.

The CPUC approved SDG&E's pilot project to install 3,500 electric vehicle charging stations at 350 locations in its service territory.

In February, state regulators confirmed that the well that had been leaking at the Southern California Gas Company (SoCalGas®) Aliso Canyon natural gas storage facility had been permanently sealed and taken out of service.

Sempra LNG & Midstream signed a project development agreement with Woodside Petroleum Ltd. to explore joint development of the proposed Port Arthur LNG natural gas liquefaction facility, to include two natural gas liquefaction trains with a total export capability of 698 billion cubic feet per year.

In March, SDG&E and other California investor-owned utilities asked that the CPUC revisit its decision on net energy metering. The CPUC agreed to do so in 2019.

SDG&E announced that it signed a contract for a new 20-megawatt energy storage facility. The utility also contracted for 18.5 megawatts of energy-efficiency projects.

Forbes magazine named Sempra Energy one of America's best large employers for 2016.

In April, SoCalGas announced a plan to resume the injection of natural gas at its Aliso Canyon natural gas storage facility.

SoCalGas opened a new compressed natural gas (CNG) vehicle-fueling station in Murrieta, Calif. The station is open 24 hours a day and is located near the intersection of two interstate highways, I-15 and I-215, convenient for trucks and other commercial vehicles.

SDG&E announced that its renewable meter adapter had saved private solar customers millions of dollars since being introduced in August 2015. (Please see sidebar on page 6 for more details.)

Sempra Energy Chairman, President and CEO Debra Reed launched an initiative to identify and explore opportunities to improve business processes, achieve efficiencies and support future growth. Hundreds of employees contributed their ideas.

Sempra Energy was named one of the 100 most trustworthy companies in America by *Forbes* magazine.

In May, Sempra LNG & Midstream completed the sale of its 25-percent interest in the Rockies Express natural gas pipeline.

SDG&E announced it would be investing $7.5 million over the next five years in an educational campaign to inspire drivers to switch to electric vehicles. The campaign complements SDG&E's work to install 3,500 new electric vehicle charging stations at 350 locations in its service territory.

A SoCalGas compressed natural gas (CNG) vehicle-fueling station.

Cameron LNG construction, by the numbers[1]

- Approximately 7,000 employees, contractors and temporary construction workers
- 21 million work hours to date
- 92 cranes spread over an area equivalent to 380 American football fields

[1] as of April 2017

Employee-driven invention eases customer path to rooftop solar

The renewable meter adapter is a technology, pioneered by SDG&E, that makes installation of solar panels faster, safer and less expensive for customers.

Before a solar system can be installed, a typical customer's electric panel must be upgraded. This can be intricate, costly and time-intensive.

SDG&E's Ken Parks and Michael Colburn recognized that if customers could avoid the panel-upgrade work, adding solar would become easier.

Parks and Colburn and their team developed this concept and, in 2013, SDG&E filed a patent for the renewable meter adapter.

As of the end of 2016, the adapter had been installed in the homes of nearly 5,000 SDG&E customers, saving customers $5 million in panel upgrade costs. In all, SDG&E has connected more than 100,000 private rooftop solar systems to its electric grid.

In June, our Mexico business IEnova was awarded a contract in partnership with TransCanada Corporation to build, own and operate an approximately 497-mile (800 kilometer), $2.1 billion natural gas pipeline in Mexico. The 42-inch diameter South Texas-Tuxpan pipeline will have a capacity of 2.6 billion cubic feet per day, supplying natural gas, instead of fuel oil, to new and existing power plants.

In July, SoCalGas opened a new compressed natural gas (CNG) vehicle fueling station in Pico Rivera, Calif., adding to the utility's network of CNG stations.

The Cameron LNG liquefaction expansion project received authorization from the U.S. Department of Energy to expand the amount of LNG it may export to countries that do not have a free-trade agreement with the U.S. If the expansion project moves forward, it could add another two liquefaction trains to the Cameron LNG facility.

Sempra Renewables acquired the 100-megawatt Apple Blossom wind project in Michigan from Geronimo Energy LLC. When the facility is completed, Sempra Renewables, together with its partners, will have wind and solar facilities in 11 states, capable of generating nearly 2,400 megawatts of electricity.

In August, SDG&E received CPUC approval to build two energy storage projects with a combined capacity of 37.5 megawatts in San Diego County. Both projects have since been completed. Storage resources improve the reliability of the electric grid: batteries charge when there is an abundance of solar or wind power and can provide energy in the early evening when demand peaks.

In September, IEnova entered into an agreement to purchase the Ventika I and Ventika II wind-generation facilities in Nuevo León, Mexico. The project is the largest operating wind farm in Mexico, with 84 turbines and a combined electricity generation capacity of 252 megawatts. The acquisition was completed in December.

IEnova was awarded the rights to build two solar energy projects: The 41-megawatt La Rumorosa Solar complex in Baja California and the 100-megawatt Tepezalá II Solar complex in Aguascalientes, Mexico. As of June 15, 2017, both projects were in the final permitting stages.

IEnova acquired Petróleos Mexicanos' (PEMEX's) 50-percent equity interest in the Gasoductos de Chihuahua joint venture, increasing IEnova's ownership interest to 100 percent. Assets involved in the acquisition included three natural gas pipelines, an ethane pipeline, and a liquid petroleum gas pipeline and associated storage terminal.

SoCalGas announced the successful test of a system that captures natural gas associated with pipeline testing or replacement. The system, now in use, allows the utility to save the gas for later use instead of venting it to the atmosphere. Approximately 108,000 cubic feet of natural gas was captured in the test – equivalent to the amount used in approximately 500 U.S. homes each day.

Sempra Energy was named to the Dow Jones Sustainability North America Index, which recognizes North American companies that are in the top 20 percent in terms of economic, environmental and social performance.

SDG&E's Environmental All-Stars are employees who volunteer in their communities.

Sempra Energy also received an "A-" from CDP, formerly the Carbon Disclosure Project, for strong climate disclosure and performance.

Sempra LNG & Midstream sold EnergySouth, the parent company of natural gas utilities Mobile Gas and Willmut Gas, to Spire Inc., formerly known as The Laclede Group Inc.

In October, Sempra Renewables dedicated Mesquite Solar 3, a 150-megawatt solar facility in Tonopah, Arizona. The facility provides power to 14 Navy and Marine Corps installations in California.

SoCalGas began work on a $3.4 million valve replacement and upgrade project at a natural-gas-valve station near Palmdale, Calif. The work is part of the utility's Pipeline Safety Enhancement Plan (PSEP), a multi-billion-dollar program that is testing and updating the region's natural gas pipeline infrastructure.

In November, Sempra LNG & Midstream filed applications with the Federal Energy Regulatory Commission (FERC) seeking authorization to site, construct and operate the Port Arthur LNG natural gas liquefaction facility in Southeast Texas. The proposed project would include two natural gas liquefaction trains capable of producing approximately 698 billion cubic feet of natural gas per year; three LNG storage tanks; and associated storage and marine facilities.

SoCalGas requested regulatory approval to resume limited injection operations and replenish the natural gas supply at its Aliso Canyon natural gas storage facility.

SoCalGas announced that it had successfully completed demonstration testing of new natural gas detection sensors, as part of its overall pipeline safety efforts. The sensors, now being installed in some locations, read concentration levels every five minutes and allow SoCalGas to remotely measure and monitor natural gas levels near high-pressure pipelines.

Sempra South American Utilities terminated negotiations to participate in the approximately $6.5 billion Gasoducto Sur Peruano (GSP) natural gas pipeline project, citing concerns related to project risk.

In December, the CPUC approved SDG&E's proposal to construct the South Orange County Reliability Enhancement project which will improve electric reliability by adding a second power source for 300,000 residents in southern Orange County.

At year-end, half of the generating capacity across all Sempra Energy businesses came from solar, wind and hydroelectric power plants.

Sunrise at the Copper Mountain Solar 3 facility in Boulder City, Nev.

SDG&E announced that it signed a memorandum of understanding with XL Hybrids to purchase up to 110 plug-in systems that convert gasoline-powered trucks into electric hybrids. Both SDG&E and SoCalGas have set goals for their fleets: by 2020, 51 percent of SoCalGas' fleet and 22 percent of SDG&E's fleet are to run on alternative fuels.

SoCalGas issued a public advisory asking customers to immediately reduce their natural gas use to help lower the risk of natural gas and electricity shortages. The CPUC ordered the creation of this "SoCalGas Advisory program" to help address concerns about regional energy reliability stemming from the continuing moratorium on natural gas injection at the Aliso Canyon natural gas storage facility.

SoCalGas announced that its power-to-gas pilot program successfully converted surplus clean energy into hydrogen. Hydrogen can be blended with natural gas, providing a use for excess renewable electricity that would otherwise go to waste.

Sempra Renewables completed construction of Copper Mountain Solar 4 in Boulder City, Nev.; Mesquite Solar 2 in Tonopah, Ariz.; and Black Oak Getty Wind in Stearns County, Minn. Combined, these projects can produce 272 megawatts of clean, renewable power.

At year-end, half of the generating capacity across all Sempra Energy businesses came from solar, wind and hydroelectric power plants.

Strategy and assets

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

Sempra Energy is organized into two operating groups: Sempra Utilities and Sempra Infrastructure. Sempra Utilities includes SDG&E, SoCalGas and Sempra South American Utilities. Sempra Infrastructure includes Sempra Mexico, Sempra LNG & Midstream and Sempra Renewables.

We believe our balanced portfolio of businesses – long-term contracted energy infrastructure assets and regulated utilities – will continue to perform well in a variety of market conditions. A range of industry and market trends support this assessment:

- Increasing investment in utility safety and reliability;
- Electric grid modernization powered by new technology and additional renewable energy resources;
- Electrification of the transportation sector;
- Increasing worldwide demand for LNG; and
- Growing energy demand in Latin America, creating the need for new energy infrastructure.

Consolidated data

Dollars in millions, except per-share amounts

	2014	2015	2016
Revenues	$11,035	$10,231	$10,183
Earnings	$1,161	$1,349	$1,370
Adjusted earnings[1]	$1,182	$1,298[2]	$1,267
Earnings per share of common stock:			
Basic	$4.72	$5.43	$5.48
Diluted	$4.63	$5.37	$5.46
Adjusted diluted[1]	$4.71	$5.21[2]	$5.05
Weighted average number of common shares outstanding (diluted, in millions)	250.7	250.9	251.2
Total assets	$39,651	$41,150	$47,786
Common dividends declared per share	$2.64	$2.80	$3.02
Debt to total capitalization	54%	54%	53%
Book value per share	$45.98	$47.56	$51.77
Capital expenditures & investments	$3,363	$3,356	$5,796

[1] Sempra Energy adjusted earnings and adjusted diluted earnings per share are non-GAAP financial measures (GAAP represents accounting principles generally accepted in the United States of America). For an explanation and reconciliation of these non-GAAP financial measures, see "Reconciliation of Sempra Energy Non-GAAP Earnings and Diluted Earnings Per Share (Unaudited)" on page 69 of this report.

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

Sempra Energy's values and code of conduct (see p. 14) guide the implementation of our business strategy. We strive to be a responsible partner: ethical, respectful, high-performing and forward-looking. We engage with our stakeholders – our customers, employees, investors, business partners, regulators and the communities we serve – and consider and incorporate their feedback when we can, building trust and strengthening relationships.

Sempra Utilities

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

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

Sempra South American Utilities: The Sempra South American Utilities are Chilquinta Energía in Chile and Luz del Sur in Peru. Both utilities invest in electric infrastructure that provides energy to more than 7.2 million consumers.

Sempra Infrastructure

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

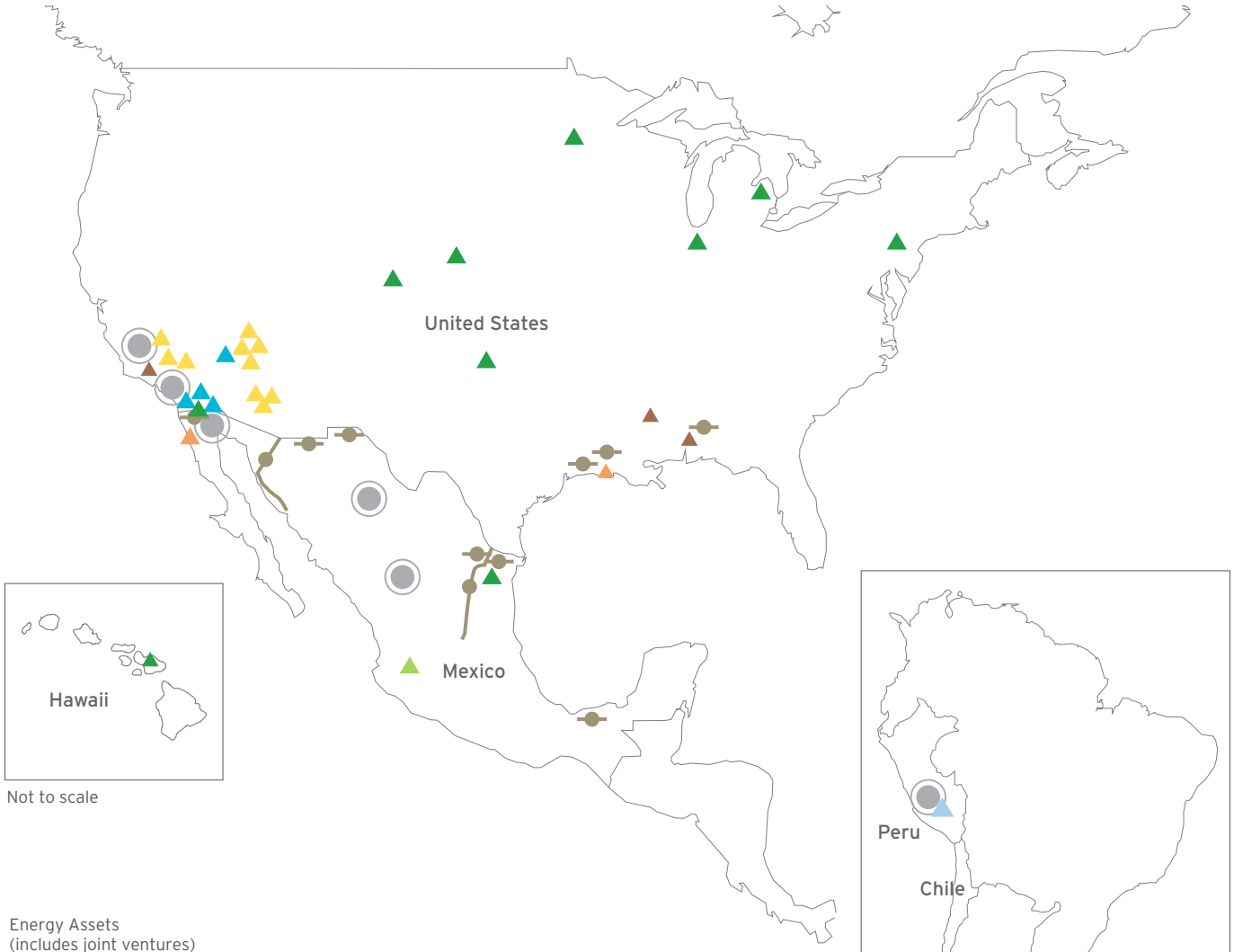
Sempra LNG & Midstream: Sempra LNG & Midstream develops and builds liquefied natural gas facilities, midstream natural gas infrastructure and natural gas storage.

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

Electric vehicles at SDG&E's Century Park office complex in San Diego, Calif.

Sempra South American Utilities, Sempra Infrastructure, Sempra LNG & Midstream, Sempra Renewables, Sempra Mexico and Infraestructura Energética Nova, S.A.B. de C.V. (IEnova) are not the same as the California Utilities, San Diego Gas & Electric Company (SDG&E) or Southern California Gas Company (SoCalGas), and are not regulated by the California Public Utilities Commission.

Our energy assets



Not to scale

Not to scale

Energy Assets
(includes joint ventures)

- Gas/Electric Utility
- Solar
- Wind
- Pipeline
- LNG Terminal
- Natural Gas Power Plant
- Natural Gas Storage
- LPG Terminal
- Hydroelectric Power Plant

Nearly **70 percent** of the members of our board of directors are women and/or people of color.

We think strategically and critically, with an eye toward the future.

Governance

Board of directors

The business and affairs of Sempra Energy are managed under the direction of the Sempra Energy board of directors, our company's highest governing body. The members of our board have a fiduciary responsibility to Sempra Energy and its shareholders to act in their best interests.

Our board provides diverse and independent leadership. With the exception of our CEO, all members of our board are independent according to the principles and standards established by the New York Stock Exchange.

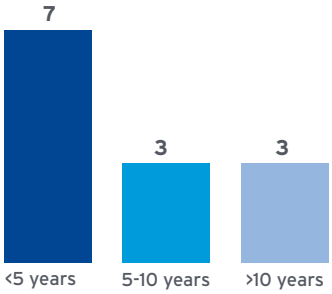
As of December 31, 2016, six of the 11 members of our board were women or people of color. The average board tenure was 8.5 years: six of the 11 members had tenure of fewer than six years; one had tenure of eight years; and four had tenure exceeding 13 years.

In the first half of 2017, the gender, ethnic and tenure diversity of our board increased, as we appointed three new directors and one director retired. As of May 15, 2017, nearly 70 percent of the members of our board of directors were women and/or people of color.

Our board reviews business plans and performance; reviews succession planning; and establishes corporate governance policies that guide Sempra Energy's operations. Our board has oversight of risk management with a focus on the most significant risks facing Sempra Energy, including strategic, operational, financial, legal and compliance risks. Throughout the year, the full board and its committees meet to review and discuss specific risk topics in greater detail.

The board is organized into five standing committees: the Audit Committee; the Compensation Committee; the Corporate Governance Committee; the Environmental, Health, Safety and Technology (EHS&T) Committee; and the Executive Committee. The EHS&T Committee is responsible for oversight of corporate responsibility, including review of environmental, health and safety programs and performance, as well as review of new technologies and topics such as cybersecurity management. The EHS&T Committee reviews Sempra Energy's annual corporate responsibility reporting efforts and is briefed on sustainability disclosure trends and initiatives.

Board member tenure[1]



[1] As of May 2017

Our board members have the skills and experience relevant to managing a large multinational energy services holding company.

Our board members have the skills and experience relevant to managing a large multinational energy services holding company, including in the following areas:

- Energy distribution and generation
- Real estate
- International business
- Executive experience
- Oil and gas industry
- Engineering
- Public sector and regulation
- Information technology
- Infrastructure development
- Finance and investment
- Risk management
- Legislative and public policy

Shareholder engagement

Sempra Energy's board is accountable to shareholders. Each year, in conjunction with our annual meeting, shareholders have the opportunity to elect each member of our board of directors; to approve the selection of our independent public accounting firm; and to cast an advisory vote on the company's executive compensation program.

In addition to these recurring votes, a shareholder who has held $2,000 of voting shares of Sempra Energy stock for at least one year may submit one proposal per year with respect to how we conduct business. These proposals are either: published in our annual proxy statement and voted on by shareholders in conjunction with the annual meeting; excluded, according to U.S. Securities and Exchange Commission guidelines; or withdrawn by the shareholder. The board may also submit proposals for shareholder consideration.

Proxy vote summary

	Percent vote "For"[1]				
Proxy item	2013	2014	2015	2016	2017
Election of directors (average)[2]	95	99	99	96	99
Ratification of independent auditors[2]	99	99	99	99	99
Advisory vote on executive compensation[2]	87	97	97	71	98
Frequency of executive compensation vote (every year)[3]	-	-	-	-	90
Independent board chairman	19	-	16	-	-
Long-term incentive plan[2]	96	-	-	-	-

[1] Defined as For/(For + Against), expressed as a percentage. Abstentions and broker non-votes are not included in the calculation.

[2] Proposals submitted by the board.

[3] Options to vote every two years and every three years received 0.25 percent and 9.75 percent of the vote, respectively.

In 2016, as part of our investor relations outreach, we met with shareholders representing 33 percent of our total outstanding shares (approximately 43 percent of our institutional share ownership) to discuss a range of environmental, social and governance issues, including the Aliso Canyon natural gas leak, methane emissions, executive compensation and the company's long-term incentive plan.

We reviewed and clarified our approach to a variety of issues, including:

Executive compensation: Following the "say-on-pay" vote at our 2016 annual meeting, we conducted extensive shareholder engagement to gather feedback on our compensation program, and made a number of refinements. The Compensation Committee now uses two distinct peer groups for the purposes of determining Long Term Incentive Plan (LTIP) performance: the S&P 500 Utilities Index and the S&P 500 Index. The Committee also now excludes stock buybacks not contemplated in the company's five-year financial plan from the earnings-per-share growth that is used to determine LTIP performance.

In addition to these changes to our compensation program, the committee also did not increase our CEO's salary or total target compensation for 2017. More details can be found in our proxy statement.

Board refreshment: Our annual proxy statement now includes the number of members of our board with fewer than five years; five to 10 years; and more than 10 years of service. Prior proxy statements used broader categories.

Values and code of conduct

At Sempra Energy, our work is guided by our values. What we do is important, but how we do it is even more critical. We act with honesty and integrity. We listen to and engage with others and seek diverse perspectives. We set and achieve tough goals. And we think strategically and critically, with an eye toward the future.

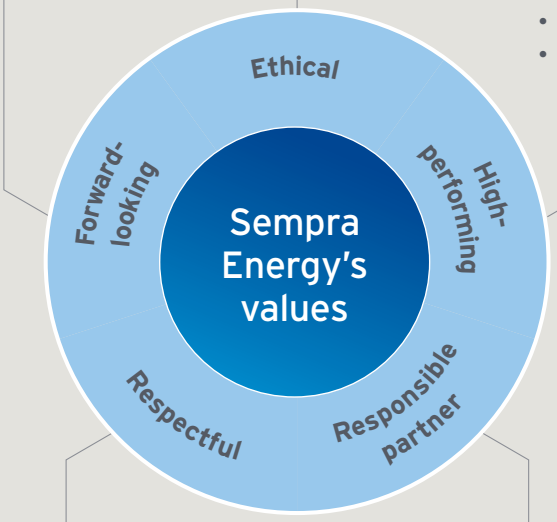
Corporate values

What we do is important, but how we do it is even more critical.

Do the right thing
- Act with honesty and integrity
- Be open and fair
- Keep our commitments
- Earn people's trust

Shape the future
- Think strategically and critically
- Anticipate market needs
- Actively pursue and create opportunities
- Implement with discipline, manage risks

Deliver outstanding results
- Set tough goals and achieve them, act with urgency
- Reward superior performance, acknowledge success
- Learn and improve
- Be accountable



People matter
- Listen, communicate clearly, be candid
- Embrace diversity of people and perspective
- Contribute individually, succeed as a team
- Treat safety as a way of life

Create positive relationships
- Engage others, seek feedback, collaborate
- Support our communities
- Be a responsible environmental steward
- Do what we say we'll do

Every employee regularly completes ethics and compliance training, customized to their position and responsibilities.

We expect each Sempra Energy director, employee and supplier to abide by our values – and also to understand and comply with our Code of Business Conduct (Code).

Our Code covers a wide range of topics, including safety; discrimination- and harassment-free workplace; confidentiality and privacy; environmental protection; charitable activities; political participation; anti-trust, anti-corruption and bribery; fair competition; conflicts of interest; information management; and securities trading.

Our commitment to responsible and ethical behavior is further detailed in a range of corporate policies and position statements, including our Discrimination- and Harassment-Free Workplace Policy, our Environmental Policy, our Climate Change and Air Emissions Position Statement, our Political Engagement and Contributions Policy and many others.

Every employee regularly completes ethics and compliance training, customized to their position and responsibilities.

Employees, contractors, customers and suppliers can report a potentially unsafe, unethical or compliance-related concern without fear of retaliation. To encourage this, Sempra Energy provides a wide range of reporting channels.

Employees may report a concern to: their immediate supervisor; the next level of management above their supervisor; the corporate compliance department; the human resources department; our chief ethics officer, currently Senior Vice President, Chief Human Resources and Administrative Officer G. Joyce Rowland; or the Ethics & Compliance Helpline. Or they may take other actions as outlined in our Code of Business Conduct.

Any contractor, supplier, employee or member of management who does not comply with applicable laws or corporate policies is subject to disciplinary action, including termination.

Any stakeholder, including an employee, contractor, customer or supplier, may report a concern or grievance – anonymously, if desired – via the Ethics & Compliance Helpline, available 24 hours a day, seven days a week. Every report made to the Ethics & Compliance Helpline is investigated. The helpline can be accessed in the following ways:

- SempraEthics.com
- United States: 800-241-5689
- Mexico: 001-770-582-5249
- Chile: 600-320-1700
- Peru: 0800-7-0690

Political involvement

Representatives from Sempra Energy and its businesses interact with policymakers at the federal, state and local level. They participate in meetings; testify before committees; write letters in support of, or in opposition to, proposed policies; and make political contributions as allowed by law.

California State Assembly Speaker Anthony Rendon shares thoughts with Sempra Energy employees.

The company and its businesses also maintain memberships in various business and trade associations that advocate on public policy.

In 2016, Sempra Energy reported aggregated lobbying expenditures across its companies, excluding political contributions, of $3,937,595 at all levels of government. Lobbying expenses include time and expenses incurred in the course of lobbying; expenses related to the operation of our offices in Washington, D.C., and Sacramento, Calif.; fees paid to lobbying firms; and the lobbying portion of fees we paid for membership in business or trade organizations. In addition to lobbying expenses, Sempra Energy and its companies made $995,689 in campaign contributions to state and local candidates and political committees and caucuses, as allowed by law. Sempra Energy does not make political contributions to federal candidates or outside the United States.

The Sempra Energy Employees' Political Action Committee (SEEPAC) supports candidates and elected officials, regardless of political party, who are open to learning about and addressing the issues our industry faces. In 2016, SEEPAC made $232,250 in political contributions, in compliance with the requirements governing political action committees.

Twice a year, we publicly disclose, corporate and SEEPAC political contributions as well as fees of $20,000 or more that were paid for memberships in business and trade associations, specifying the amount of such fees that were attributable to lobbying.

In 2016, Sempra Energy received the highest score for transparency on the Center for Political Accountability's CPA-Zicklin Index, a ranking that benchmarks the political disclosure and accountability policies and practices of leading U.S. companies.

Cybersecurity risk and mitigation

Cybersecurity is a priority at Sempra Energy. In addition to the cyber risks that all corporations face, the utility industry faces evolving cybersecurity risks associated with protecting confidential customer information and electric and gas system infrastructure. An attack on our information systems or the electric or natural gas system infrastructure could have a material adverse effect on our businesses, cash flows, financial condition, results of operations and/or prospects. The theft, damage or improper disclosure of sensitive electronic data could subject us to penalties for violation of applicable privacy laws; subject us to claims from third parties; require compliance with notification and monitoring laws, regulations and requirements; and harm our reputation.

Cybersecurity and related risks for the company are overseen by the company's senior leadership through the Compliance and Enterprise Risk Committee. The Committee is chaired by Joe Householder, corporate group president of infrastructure businesses, and Steven Davis, corporate group president of utilities. In March 2017, Sempra Energy announced the appointment of P. Kevin Chase as chief information officer. Mr. Chase has responsibility for the physical and cyber security of the Sempra Energy family of companies.

Risk management

To develop and deliver safe, reliable and affordable energy and energy services to approximately 32 million consumers, our company and its businesses must prepare for adverse events and uncertainties. We take this responsibility very seriously.

Key risks

Sempra Energy identifies, assesses and, where possible, mitigates a broad and complex set of risks commonly associated with the energy industry, as well as risks specific to our company. Our Annual Report on Form 10-K, filed each year with the U.S. Securities and Exchange Commission, provides a description of these risks.

Types of risk assessed include financial risks; operational risks, including safety and cybersecurity risks; regulatory and compliance risks; and other risks. Examples are listed below.

- Safety risk – There are inherent public and employee safety risks associated with operating energy generation, processing, transmission and distribution facilities.
- Financial risk – Sempra Energy's cash flows, ability to pay dividends and ability to meet its debt obligations largely depend on the performance of its businesses and the ability to utilize the cash flows from its businesses.
- Operational risk – Severe weather conditions, natural disasters, catastrophic accidents or acts of terrorism could materially adversely affect our businesses, financial condition, results of operations, cash flows and/or prospects. (SoCalGas President and Chief Operating Officer Bret Lane discusses the Aliso Canyon natural gas leak on page 36.)
- Cybersecurity risk – The malicious use of technology could present a risk to our information systems and the integrity of our energy grid and our natural gas pipeline infrastructure and storage facilities.
- Regulatory risk – Our businesses are subject to complex government regulations and may be materially adversely affected by changes in these regulations or in their interpretation or implementation.
- Reputational risk – The reputation of our companies is fundamental to our license to operate in or near communities. This includes impacting our ability to site projects and receive needed approvals and permits from local governments and regulatory and permitting agencies.
- Compliance risk – Our businesses incur environmental compliance costs, and future environmental compliance costs could have a material adverse effect on our cash flows and results of operations.
- Climate change risk – A combination of other risks: A changing climate could have operational, regulatory and reputational impacts on our businesses. A more detailed description of climate risk is on page 23.

Risk management process

At Sempra Energy, we assess a risk based on its ability, probability and potential to have a significant adverse impact on our business.

We take a rigorous approach to risk management. We use a risk framework and risk registry to assign and track risks internally. We also use a range of tools and methods, including risk maps, risk composition, risk correlation and sensitivity analysis. We look to mitigate, share or transfer risk where appropriate through methods such as operational enhancements; sharing counterparty/liquidity risk in joint ventures; use of guarantees or long-term contracts; insurance; and risk indemnification.

Risk management teams from across the company use this approach. For each identified risk, the teams assess the potential impact, likelihood of the event and strength of controls. Once a risk has been assessed, risk managers work to mitigate it.

Each principal business' risk management department reports directly to its CEO, chief operating officer and/or chief risk officer – and reports both risks and risk mitigation strategies to its board of directors. Sempra Energy's corporate risk management department reports to the chief financial officer – and reports aggregated risks to the Sempra Energy board of directors.

Effective risk management is essential to maintaining the stable operation of our businesses – and to achieving strong and predictable business outcomes.

Risk mitigation in Cleveland National Forest

A team of hundreds of SDG&E employees are working to fire-harden portions of the utility's electrical distribution system in an 880 square-mile high-risk fire area of San Diego's backcountry. Similar work has been completed in other areas of the utility's service territory.

Crews are replacing more than 2,200 existing wood poles with steel poles. These steel poles resist fire and also allow for increased spacing between wires, reducing the risk of fire from wire-to-wire contact caused by strong winds. Crews are replacing existing conductors (power lines) with stronger steel-core conductors. Crews are also placing approximately 13 miles of power lines underground. All of these activities improve system resilience and mitigate fire risk.

The project utilizes sophisticated Geographic Information System (GIS) technology to provide information on each specific area of the project to all the people working on it. Work is being overseen by more than 40 environmental monitors. The project even has its own fire prevention plan.

SDG&E is replacing wood poles with steel poles in high-risk fire areas.

By tracking compliance performance and key metrics, we protect our company from exposure to unnecessary risk.

Compliance and management systems

As an energy services holding company, Sempra Energy expects its businesses to utilize effective processes and systems to optimize performance and ensure compliance with company policies and all applicable laws, rules and regulations. By tracking compliance performance and key metrics, we protect our company from exposure to unnecessary risk and help ensure strong performance.

At the core of our compliance processes is our "tone from the top," which is highlighted in our Code of Business Conduct – integrity, honesty and respect. But we believe tone from the top is not enough. We expect all employees to embrace our values and our commitment to compliance and ethical behavior.

A wide range of processes and management systems help us achieve compliance. These are based on the following core elements:

- **Leadership oversight and accountability –** Our senior leadership team is committed to promoting and enhancing our culture of compliance. Our company has designated chief compliance officers and related oversight committees to oversee compliance programs at the parent company as well as at each principal business.
- **Standards of conduct, policies and procedures –** Our company has a Code of Business Conduct for directors, employees and suppliers. We also keep our policies up-to-date, and communicate on a regular basis to those impacted.
- **Education, communication and awareness –** Our company has implemented a risk-based program to provide education and communication on a variety of compliance topics. Training courses are customized according to each employee's position and responsibilities. Compliance personnel can monitor employee comprehension of key compliance principles, and can make changes to course curricula to improve training effectiveness.
- **Risk assessments, auditing and monitoring –** Our company completes an enterprise-wide risk assessment each year. The risk assessment is one of our key inputs into the development of our annual internal audit plan. In addition, each compliance program designs and implements processes to monitor effectiveness and implement improvements.
- **Establishment of reporting processes and procedures –** Anyone may anonymously report ethics and compliance concerns, grievances or potential violations through our Ethics & Compliance Helpline, available 24 hours a day, seven days a week. Every report made to the Helpline is investigated in a timely manner. More information on the Helpline is on page 16.

To support the production and publication of our corporate responsibility report, we use an enterprise-wide system to collect, aggregate and analyze emissions, environmental compliance, water, safety, diversity and other types of data from Sempra Energy's businesses. These data are also used to develop and review companywide performance objectives, responsibilities and deadlines.

Suppliers must deliver essential equipment, parts and services – even in adverse conditions.

Supplier selection and monitoring

Supplier selection and monitoring* is an important aspect of risk management at Sempra Energy. Our businesses must provide reliable energy and energy services to their customers. They need suppliers that can deliver essential equipment, parts and services – even in adverse conditions.

Procurement procedures and policies guide our businesses as they select and monitor suppliers and business partners. Working with a wide range of suppliers (small, mid-sized and large companies; new as well as more established companies; and companies with operations in different locations) helps ensure system reliability, and results in better service and lower costs.

Once a supplier has been selected, supply chain managers monitor performance to assess whether a particular company delivers goods or services as expected and whether their operations are in alignment with Sempra Energy's values and standards. This includes acting with integrity (suppliers are subject to anti-corruption review); complying with applicable laws and regulations; achieving strong health and safety performance; respecting employee rights; and minimizing impacts on the environment. We provide each of our suppliers with a copy of our Code of Business Conduct, which is also posted on sempra.com.

To complement the work of supply chain managers, our Audit Services group conducts supplier audits, reviewing safety procedures and performance; training programs; subcontracting policies; and other areas.

Information on how to do business with Sempra Energy companies can be found on sempra.com.

*Information on the impact of our supply chain may be found on page 44.

Examples of compliance and management systems

Sempra Energy and its businesses utilize many different programs, processes and management systems to optimize compliance performance.

- Our Audit Services department, which reports directly to the Sempra Energy board of directors, completed 120 audits in 2016, reviewing business practices and identifying possible improvements.
- Cybersecurity-focused employee communications, one-click reporting and other tracking and reporting tools help protect company assets.
- Our California utilities (SDG&E and SoCalGas, collectively) use an environmental and safety compliance management program to ensure compliance with environmental and safety laws; rules and regulations; and company standards. Our other businesses utilize ISO14001 and other international standards.
- Business resumption plans outline how we will recover and resume operations following a natural or human-caused disaster or other unforeseen disruption.
- We use a lobbying activity tracking system to manage political activity and meet local, state and federal political reporting requirements.

The environment

The 150-megawatt Mesquite Solar 1 facility in Tonopah, Ariz.

Climate change 22
Climate change risk
Actions to reduce emissions

Emissions 30

Water 38

Waste and recycling 40

Environmental compliance 42

Biodiversity 43

Supply chain impacts 44

Climate change

Sempra Energy is concerned about climate change. That's why we've been developing low-carbon energy infrastructure and reducing emissions across our portfolio for more than a decade.

We see great opportunity in addressing climate change. A range of industry and market trends indicate that demand for energy, including lower-carbon energy and energy-related services, will continue to increase. These trends include:

- Increasing investment in utility safety and reliability;
- Electric grid modernization powered by new technology and additional renewable energy resources;
- Electrification of the transportation sector;
- Increasing worldwide demand for LNG; and
- Growing energy demand in Latin America, creating the need for new energy infrastructure.

As we work to meet the demands of this marketplace, we simultaneously reduce emissions. A description of the many ways we do this is on page 26. A list of our emissions-reduction milestones is on page 25.

We also manage a wide range of risks associated with climate change.

Climate change risk

A changing climate has regulatory, operational and reputational impacts on our business.

Regulatory climate risk: Sempra Energy's businesses are subject to many rules and regulations that require us to limit our greenhouse gas emissions. Many of these regulations are related to increasing concerns about climate change.

We are required to obtain permits, licenses, certificates and other approvals to operate our businesses and disclose our environmental impact. Failure to comply with these requirements could subject our businesses to substantial penalties and fines – and might result in the significant curtailment of our operations.

The way we operate our infrastructure helps to mitigate these risks. Our natural gas power plants are built with the latest emissions-control technology. Our solar and wind assets require negligible amounts of water to operate. And we work to operate our natural gas infrastructure safely and efficiently, protecting the integrity of our pipelines and other assets.

Operational climate risk: Climate change could exacerbate physical risks to our infrastructure. Rising temperatures, drought conditions and extreme winds can impact our operations in the Southwest United States.

SDG&E customers can choose 100 percent renewable energy

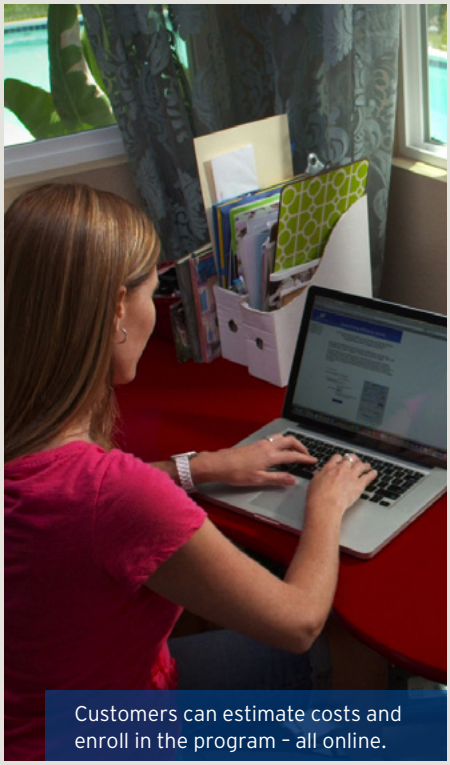
With just a few clicks, and for just a few dollars more per month, SDG&E customers can now opt to have 100 percent of their electricity come from renewable sources through a program called EcoChoice.℠

Here's how it works:

- An interested customer estimates their monthly cost using the calculator at sdge.com/EcoChoice and enrolls in the program online;
- SDG&E purchases renewable power; and
- The customer begins receiving power attributable to* renewable sources.

Customers can specify how much of their power will come from renewable sources – from 50 percent to 100 percent.

SDG&E already delivers power from renewable sources (43 percent at year-end 2016). EcoChoice provides a simple way for customers to be even greener, and increase that amount to 50 percent, 60 percent or even 100 percent.



Customers can estimate costs and enroll in the program – all online.

* Note: SDG&E purchases this electricity specifically for EcoChoice customers, but delivers it using its electrical grid, a system that carries power from a range of sources.

Hurricanes and flooding can impact our operations in the Gulf Coast. Sea level rise can impact operations in both of these areas.

We mitigate these risks by strengthening our infrastructure. This includes repositioning electric lines underground (where they are not exposed to vehicles, tree branches or other potential sources of trouble); converting power poles from wood to steel; working to prevent wildfires, including vegetation management (tree trimming); monitoring and predicting the weather with company meteorologists and an extensive system of weather stations (in SDG&E's service territory); preparing the communities where we work for possible disasters or unforeseen events; and training our employees.

We also prepare for possible longer-term impacts of climate change by incorporating climate change projections into our planning process for upgrading or building new facilities.

Reputational climate risk: At Sempra Energy, we set clean energy targets. We implement energy-efficiency incentives and technologies to help our customers minimize their emissions and reduce their costs. We also work to operate our infrastructure safely and efficiently.

We face reputational risk if we miss these targets; if new technologies do not perform as expected; or if we encounter unforeseen challenges as we integrate new types of energy into the grid (renewables, storage and customer-generated energy). Moreover, events such as changing or extreme weather conditions, natural disasters, equipment failures, catastrophic accidents or other events might impact our infrastructure, our customers and our reputation.

We mitigate these risks by identifying strategies, making investments and taking actions that help us meet our targets; by exploring and investing in many different technologies; and by encouraging regulators to allocate costs fairly given the rapid transformation that is occurring in our industry.

For a more detailed discussion of Sempra Energy's climate risks and opportunities, please see our response to CDP's annual climate change survey at www.cdp.net.

SDG&E meteorologists work to monitor and predict the weather.

Emissions-reduction milestones

At Sempra Energy, we develop low-carbon energy infrastructure and reduce emissions.

- Coal has not been a part of our power-generation portfolio for over a decade.
- Sempra Renewables launched the first utility-scale photovoltaic (solar) generation facility in the U.S. in December 2008.
- SDG&E became the first fully smart-meter-enabled utility in the U.S. in 2012. Smart meters help customers become more energy-efficient.
- Sempra Renewables' Auwahi wind farm, which went into service in 2012, was one of the first integrated storage-wind projects in the country.
- In 2015, SDG&E's Borrego Springs microgrid became the first in the nation to leverage renewable energy to power an entire residential community.
- SDG&E was the first investor-owned utility to achieve California's 33-percent renewable energy mandate. The utility met the target in 2015, a full five years before the deadline.
- SoCalGas worked with partners to develop a near-zero-NOx-emissions heavy-duty engine fueled by natural gas. The engine, the first of its kind, was deployed commercially in 2016.
- SDG&E, with partners, is responsible for one of the largest lithium-ion grid-connected battery systems of its kind in the world. The 30-megawatt system became operational in early 2017.
- Our California utilities have installed advanced meters throughout their service territories. These meters gather data remotely, eliminating the fleet vehicle emissions associated with in-person meter reading.
- At year-end 2016, half of the generating capacity across all Sempra Energy businesses came from solar, wind and hydroelectric power plants.

In addition to these milestones, Sempra Energy's businesses continue to innovate.

- SDG&E is involved in a demonstration project that would allow electric vehicle owners to provide battery power to the electrical grid.
- SoCalGas, in collaboration with the University of California at Irvine, is testing a power-to-gas system that creates hydrogen gas from water through a chemical reaction known as electrolysis. The hydrogen gas, which is carbon-free, can be blended with natural gas to create a lower-emissions fuel source.
- A Sempra Renewables start-up unit is developing software that allows utilities to more easily integrate renewable energy into the electric grid.
- SoCalGas is exploring ways to add dairy biogas to its natural gas distribution system. This would offset a significant amount of greenhouse gas emissions: California's dairies release nearly 20 million metric tons of CO_2e into the atmosphere each year. (See p. 26 for definition of CO_2e.)

Construction of 21-megawatt Auwahi Wind in Maui, Hawaii.

What is CO_2e?

Not all greenhouse gases have the same impact on the environment. For example, one unit of methane has approximately 25 times the impact of one unit of carbon dioxide. To make it easier to quantify greenhouse gas emissions, organizations and businesses calculate and report their emissions as carbon-dioxide equivalent (CO_2e) to accurately describe the cumulative impact of the different types of greenhouse gases they emit.

Actions to reduce emissions

We work to reduce our emissions and those of our customers.

We build and operate natural gas and LNG infrastructure. Natural gas is the cleanest fossil fuel and is increasingly available and affordable. Our Mexico business, IEnova, operates and is developing natural gas pipelines that will make natural gas a viable and cleaner option for industrial users and power generators in Mexico. Also, when it is liquefied, natural gas can be transported over long distances and provide end users with a cleaner alternative to fuel oil or coal. Our work with our partners to develop LNG infrastructure may bring this lower-carbon fuel to countries that currently rely on fuel oil or coal. Over time, these activities could contribute in a meaningful way to a reduction in global greenhouse gas emissions.

We use natural gas instead of coal in our power plants. In 2016, our businesses' natural gas-fired power plants generated more than 6 million megawatt-hours of "always-on" electricity, emitting some 2.6 million metric tons of carbon dioxide equivalent (CO_2e) – roughly half what would have been produced if that power had been supplied by coal-fired power plants. We have not owned coal-fired generation assets for more than a decade.

We generate energy using renewable sources. In 2016, our businesses, with their partners, generated about 6 million megawatt-hours of emissions-free renewable electricity. (Traditional power plants, producing the same amount of power, would have emitted more than 3 million metric tons of carbon dioxide.)

We purchase and deliver renewable energy. In 2016, 43 percent of the energy SDG&E delivered to its customers came from renewable sources, far exceeding the regulatory requirement that it deliver 33 percent renewable energy by 2020.

We build and invest in emissions-free energy infrastructure. Since 2008, we have developed or invested in projects in North America that can produce more than 2,700 megawatts of renewable energy. We anticipate that projects representing an additional 274 megawatts will begin operation by year-end 2019. Our Luz del Sur subsidiary in Peru operates the Santa Teresa hydroelectric plant which can produce 100 megawatts of clean energy. As the cost of developing renewable energy continues to fall, it will represent a greater proportion of the energy mix.

We improve the efficiency of energy infrastructure, including our natural gas pipelines and storage facilities. We minimize the amount of energy and water needed in operations. And our businesses inspect and repair or replace natural gas pipelines and related equipment to improve safety and reduce emissions.

We encourage our customers to save energy or to shift their energy use to off-peak hours. Energy-efficiency measures save hundreds of thousands of megawatt hours of electricity and tens of millions of therms of natural gas each year. Improving energy efficiency is one of the easiest and lowest-cost ways of reducing energy use and associated greenhouse gas emissions. In some of our utility operations, we also implement time-of-use rates for customers, offering incentives to use energy when demand is low, and minimizing the need to deploy higher-emission peaker power plants to generate energy.

We use clean transportation and develop the infrastructure that allows our customers to do the same. SoCalGas and SDG&E have said that, by 2020, 51 percent and 22 percent of their fleets, respectively, will use alternative fuels. In 2016, SDG&E received approval from the CPUC to install up to 3,500 electric vehicle charging stations to facilitate customer transition to electric vehicles. SoCalGas is working to expand the availability of natural gas (including methane captured from organic sources, also known as renewable gas) as a low-carbon fuel source. In 2016, San Diego's Metropolitan Transit System moved its fleet to 100 percent renewable gas.

We integrate new technologies into our operations. The smart grid integrates battery storage; advanced meters (which transmit customer usage data to utilities and eliminate the emissions from fleet vehicles used for manual meter reading); smart devices, such as thermostats; home energy management systems; electric vehicles; and electric vehicle charging stations; allowing our utilities to more precisely deliver energy when and where it is needed. For additional examples of innovation, please see the Emissions-reduction milestones" sidebar on page 25.

Growing tomatoes, with an assist from SoCalGas

New technologies are changing the way our customers use electricity and natural gas. One example comes from Houweling's Tomatoes and Nursery in Camarillo, Calif. Houweling's 125-acre greenhouse uses a combined heat-and-power system that generates electricity, heat and condensed water, and repurposes carbon dioxide to benefit crop production.

Here's how it works: Three on-site internal-combustion engines generate heat and electricity for the greenhouse, including its 24/7 grow lights. Excess heat from the engines heats the greenhouse. Carbon dioxide from the exhaust system increases crop production. And condensed water produced by the exhaust system (up to 9,500 gallons per day) helps water the plants. The nursery also sells excess electricity from the system back to the grid.

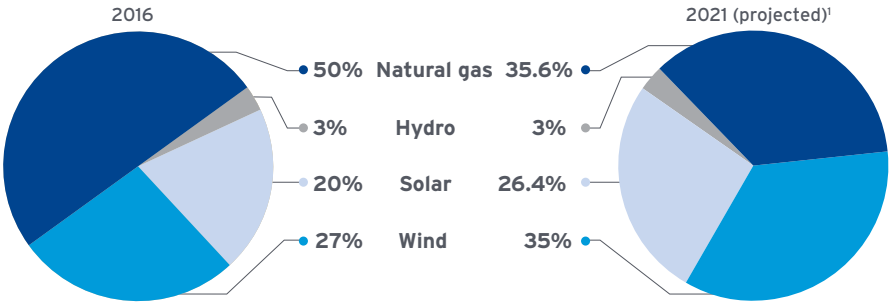
SoCalGas demonstrated this system to show agricultural companies how they can meet California's stringent air quality compliance regulations, while increasing efficiency and cutting operational costs.

Houweling's 125-acre greenhouse is both innovative and efficient.

At year-end, **half of the generating capacity** across all Sempra Energy businesses came from solar, wind and hydroelectric power plants.

Since 2006, we have publicly disclosed our greenhouse gas emissions. In 2016, we received an "A-" on our disclosure, reflecting the fact that Sempra Energy is utilizing best practices in reporting on greenhouse gas emissions and climate change risk.

Sempra Energy generating capacity by energy source



[1] Includes all generation capacity planned or under construction as of June 15, 2017.

Weather-related impacts may intensify in the coming years.

Climate change resilience at SDG&E

SDG&E's energy infrastructure is subject to many weather-related impacts, projected to intensify in the coming years. To protect its ability to continue to deliver gas and electricity, SDG&E is strengthening its system. This includes incorporating the probability of sea-level rise into its planning process for coastal facilities; ensuring that electricity and natural gas distribution systems are prepared for both drought conditions and extreme rainfall; making the electric system more resistant to wildfire impacts; and ensuring that its systems can deliver electricity to cool homes and businesses during periods of extreme temperatures and high demand.

Individuals from 15 different departments participate in internal climate advisory group that evaluates and monitors climate-related risks. SDG&E also is collaborating with the U.S. Department of Energy and 18 other utilities through the Partnership for Energy Sector Climate Resilience.

Sempra Energy's position on U.S. energy policy

Complex energy infrastructure requires long lead times and significant financial investment.

Sound and stable policies are particularly important to the energy industry, given the long lead times and significant financial investment required to develop energy infrastructure.

Our position on U.S. energy policy is based on the following principles:

- We advocate for a balanced policy approach that ensures consumers have access to safe, clean, affordable and reliable energy. We support national energy policies that promote supply diversity, technological innovation, energy efficiency and sound environmental stewardship.
- We believe that we can develop energy resources while also protecting the environment. Both of these objectives can and must be achieved to help power our national economy, preserve and create jobs and protect our quality of life.
- We believe U.S. policy should address climate change and energy in a coordinated manner. Natural gas, renewable energy and the development of new energy technologies like batteries should play a central role in U.S. climate and energy policy.
- We support the efficient use of energy, including in the transportation sector where electric and natural gas vehicles play an increasingly important role. Greater energy efficiency improves energy security and reduces environmental impacts.
- We believe that government support of technology development is essential. Government investment in technical education as well as research and development encourages the advancement of emerging energy technologies, which often have a high level of technical risk and long lead times to market.
- We support the implementation of stable and sensible tax policies that encourage investment in energy infrastructure and spur innovation in nascent technologies.
- We advocate for sensible and consistent regulation of our industry. Changing, excessive, duplicative or potentially conflicting regulations can increase costs, delay government approvals and adversely impact investment decisions; all of which increase consumer energy prices.
- We advocate for a free- and fair-trade policy that breaks down foreign barriers to U.S. goods and services and addresses unfair foreign trade practices and imports. Our economy and national security benefit from the export and import of energy resources such as LNG.

Our scope 1 and scope 2 emissions decreased **20 percent***, year-over-year.

Emissions

At Sempra Energy, we work to reduce emissions and to identify and mitigate climate-change related risks.

In 2016, our scope 1 and scope 2 emissions (see page 33 for definitions) were approximately 4.9 million metric tons of carbon-dioxide equivalent, also known as CO_2e (defined on page 26). This represents a year-over-year decrease of about 20 percent*, primarily due to less energy production at SDG&E's natural gas-fired power plants and the sale of the Mobile Gas and Willmut Gas utilities. We reported all emissions from the Aliso Canyon natural gas leak, which took place from October 2015 to February 2016, in our 2015 report – these emissions totaled approximately 2.1 million metric tons of CO_2e.

Sempra Energy's 2016 scope 3 emissions (emissions not directly associated with our operations) were approximately 52.8 million metric tons of CO_2e (see page 33 for a definition of "scope 3" and page 26 for a definition of "CO_2e"). This figure includes emissions from the generation of electricity that SDG&E purchased and delivered to its customers; emissions from our customers' combustion of natural gas delivered to them by our SoCalGas, SDG&E and Ecogas utilities; and emissions from employee air travel. Our reported scope 3 emissions do not include upstream emissions from natural gas production wells.

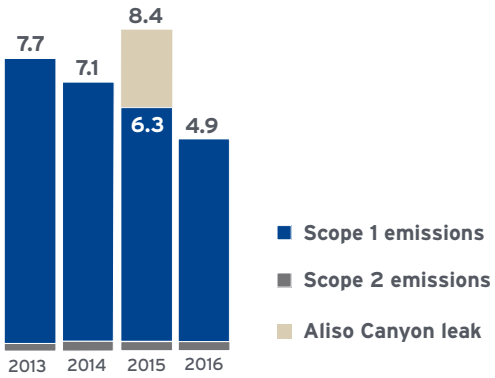
As required by state law, our California utilities purchase emissions allowances and offsets to cover emissions from power plants, natural gas compressor stations, purchased power imported from out of state and customer use of natural gas. When feasible, the utilities purchase offsets within the State of California.

*Excluding emissions from the Aliso Canyon natural gas leak

Buses at a natural gas refueling station in SoCalGas service territory.

Scope 1 and 2 greenhouse gas emissions[1,2,3]

Million metric tons of CO_2 equivalent

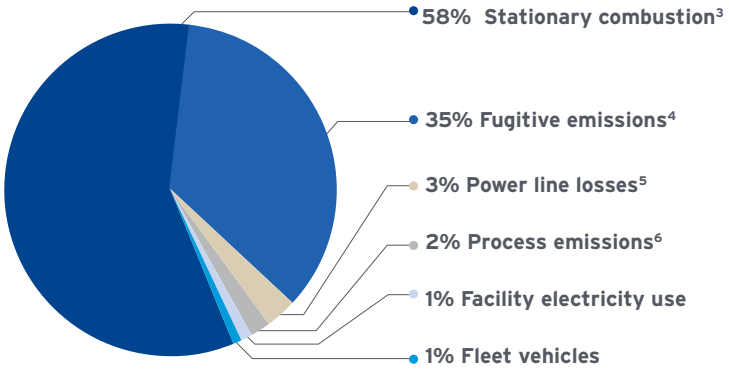


[1] Emissions from electric utility Luz del Sur are not included. Only some of the emissions from Cameron LNG and Chilquinta Energía are included. These entities do not currently track all of their emissions.

[2] 2016 emissions data are undergoing third-party verification and may be updated. 2015 emissions data have been updated following an independent verification.

[3] The leak at the Aliso Canyon storage facility resulted in the loss of approximately 4.62 billion cubic feet of natural gas. Using the 100-year global warming potential (GWP) value of 25 for methane, this is equal to 2.1 million metric tons of CO_2 equivalent. This GWP comes from the Fourth Assessment Report of the Intergovernmental Panel on Climate Change and is consistent with the GWP used for estimates produced by the California Air Resources Board. We remain committed to fully mitigating the emissions impact of the natural gas lost.

2016 Scope 1 and 2 greenhouse gas emissions by source[1,2]



[1] Emissions from electric utility Luz del Sur are not included. Only some of the emissions from Cameron LNG and Chilquinta Energía are included. These entities do not currently track all of their emissions.

[2] 2016 emissions data are undergoing third-party verification and may be updated.

[3] Emissions primarily from our natural gas power plants.

[4] Emissions from leaks or other unintended releases of natural gas, excluding emissions from the Aliso Canyon leak. The leak at the Aliso Canyon storage facility resulted in the loss of approximately 4.62 billion cubic feet of natural gas. Using the 100-year global warming potential (GWP) value of 25 for methane, this is equal to 2.1 million metric tons of CO_2 equivalent. This GWP comes from the Fourth Assessment Report of the Intergovernmental Panel on Climate Change and is consistent with the GWP used for estimates produced by the California Air Resources Board. All emissions from the leak were included in our 2015 numbers.

[5] Emissions from the generation of electricity that we lose during transmission and distribution.

[6] Emissions from physical or chemical processes related to combustion.

Encouraging energy efficiency through our utilities

Under California state law, utility profits are not driven by the amount of energy sold. So SDG&E and SoCalGas work with their residential, business and industrial customers to determine ways they can save energy and reduce their energy bills. In 2016 alone, these energy-efficiency programs saved approximately 346,000 megawatt-hours of electricity, enough to power 57,627 homes for a year; and nearly 40 million therms of natural gas, enough to serve nearly 80,000 homes for a year. Both utilities are incentivized by regulators to meet or exceed energy-efficiency goals.

In Chile, our Chilquinta Energía business continued its energy-efficiency program named "Iluminados." Customers in the cities of Valparaiso, Quilpué and Villa Alemana can have advanced meters installed in their homes or businesses – and can exchange older inefficient refrigerators for a reduced price on a new, more efficient (A+ or A++ rated) refrigerator.

Nearly 400 customers have benefited from Iluminados, achieving an average energy savings of 15 percent per household.

Reducing methane emissions at SoCalGas

Since the company joined the Natural Gas Star program in 1993, SoCalGas has implemented practices that have resulted in the reduction of more than 800,000 metric tons of CO_2e, the equivalent of removing 169,000 cars from the road for a year. As a result of these efforts, SoCalGas has one of the lowest methane emission rates of natural gas utilities in the U.S. (See sidebar on page 55 to learn more about natural gas pipeline testing and methane sensors at SoCalGas.)

For additional information on emissions, methane, safety and regulatory issues, please click below:

Sempra Energy – Emissions

SoCalGas – Methane

SoCalGas – Safety

SoCalGas – Regulatory

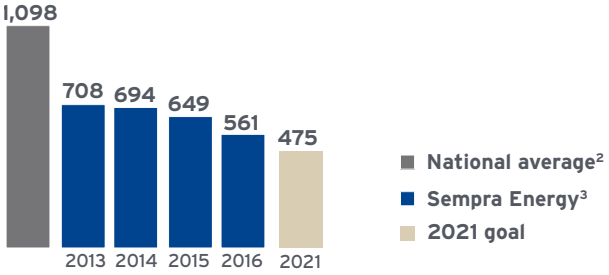
SDG&E – Methane

SDG&E – Safety Enhancement

SDG&E – Safety & Reliability

CO_2 emissions rate for power generation[1]

Pounds of CO_2 per megawatt-hour



[1] 2016 emissions data are undergoing third-party verification and may be updated.

[2] Source: U.S. Energy Information Administration Electric Power Annual 2015.

[3] Emissions rate of Sempra-owned generation on an equity share basis. Data from 8-megawatt Chilquinta Energía plant is not included.

Natural gas-fired power plants operated by Sempra Energy businesses represent our most significant source of direct (scope 1) greenhouse gas emissions. Yet these power generation operations are very efficient: In 2016, we emitted 561 pounds of carbon dioxide per megawatt-hour of electricity generated. This rate is half of the average U.S. emissions rate for power generation.

As we continue to develop and operate additional renewable energy resources, we expect that our total energy mix will become even cleaner and our power-generation CO_2 emissions rate will continue to decline.

In 2013, we set a target of achieving a rate of 658 pounds per megawatt hour or less by 2016, a 10-percent decrease compared with our 2010 baseline. We achieved this goal in 2015. We are now aiming to achieve a rate of 475 pounds per megawatt hour or less by 2021, a 35-percent decrease compared with our 2010 baseline. We are also looking into developing a science-based emissions-reduction target, aligned with the level of carbon-emissions reduction required to keep global temperature increase below 2 degrees Celsius compared with pre-industrial temperatures. More information on science-based targets is available at sciencebasedtargets.org.

Fugitive emissions (natural gas/methane emissions from leaks or other types of unintended or irregular releases) are our second most significant type of greenhouse gas emissions, behind emissions from stationary combustion. In 2016, fugitive emissions accounted for 94 percent of our methane emissions. Process emissions accounted for the remaining 6 percent. Our companywide methane emissions were 1.8 million metric tons of CO_2e: 1.5 million metric tons from SoCalGas; 0.15 million metric tons from SDG&E; and 0.12 million metric tons from our other businesses.

Categorizing greenhouse gas emissions

Our natural gas-fired power plants are a source of scope 1 emissions.

Greenhouse gas emissions are categorized as follows: scope 1 or direct emissions are emitted by the reporting company; scope 2 and scope 3 emissions are emitted by other companies or customers, as a result of the reporting company's activity.

- **Scope 1 emissions** – Emissions from sources that are owned or controlled by the reporting company. For Sempra Energy, these include emissions from natural gas-fired power plants, natural gas pipelines and fleet vehicles.
- **Scope 2 emissions** – Emissions emitted by another company to generate electricity, heating/cooling or steam that the reporting company purchases and then uses in its own operations. For Sempra Energy, these include emissions from electricity purchased and used in our own facilities, as well as emissions from the electricity purchased for our customers but lost during transmission and distribution.
- **Scope 3 emissions** – Emissions (excluding those already reported in scope 2) that are a result of the reporting company's activity, but occur at sources owned or controlled by others. For Sempra Energy, these include emissions from customer use of our services (such as customers burning natural gas we have delivered); emissions from the generation of electricity purchased for and delivered to our customers; emissions from the production of natural gas purchased for and delivered to our customers; and emissions from the production and delivery of the raw materials we need for our business (pipes, wires, meters, office supplies). Note that due to the complexity involved in tracking or estimating emissions from some sources, Sempra Energy does not report on all of types of scope 3 emissions.

These descriptions are based on definitions provided in the World Resources Institute's Greenhouse Gas Protocol.

Capturing – and then using – dairy biogas

According to the California Air Resources Board, California's dairies release approximately 19.6 million metric tons of CO_2e into the atmosphere each year. By capturing and conditioning this biogas, then putting it into the natural gas distribution system and delivering it to customers, we can offset a significant amount of greenhouse gas emissions. This also helps California meet its renewable-energy goals, as biogas is considered a renewable resource.

SoCalGas' biogas conditioning service helps customers use biogas produced in their own operations. The company is exploring other ways to increase the supply of biogas in California.

SoCalGas and SDG&E have been focused on measuring, monitoring and reducing methane emissions for many years. All of our operations in the U.S. follow the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations for infrastructure monitoring and testing. To facilitate our compliance with all federal and state regulations, we have implemented or are taking the following actions to help detect and reduce methane emissions:

- We implement best management practices through programs such as the U.S. Environmental Protection Agency's Natural Gas STAR program, of which SoCalGas has been a member for nearly two decades;
- We are proposing to capture bio-methane (renewable gas) from dairies and other sources, and add it to our natural gas distribution system;
- We eliminated all cast-iron pipe from our natural gas distribution system more than 20 years ago;
- We prioritize replacement of pipelines that do not have current corrosion-prevention technologies;
- We capture natural gas during pipeline testing instead of venting it to the atmosphere;
- We conduct leakage surveys using unmanned aerial vehicles (drones), fiber optic cable and point sensors;
- We implement new advanced monitoring technologies and practices in all natural gas storage operations; and
- We are piloting a power-to-gas system that uses surplus renewable energy to drive a chemical reaction known as electrolysis that creates carbon-free hydrogen gas from water. This hydrogen gas can be blended with natural gas to create a lower-emissions fuel source.

Best management practices help our utilities reduce methane emissions.

Helping customers reduce their emissions

We work to improve our customers' access to alternative fuels.

In July, SoCalGas opened a compressed natural gas (CNG) station in the heart of a warehouse and distribution district east of Los Angeles.

The new station is open to the public, and strengthens the network of CNG stations across a key regional goods-movement corridor, providing owners and operators of natural gas-fueled trucks and other vehicles with a convenient place to refuel.

Newly available heavy-duty CNG trucks can reduce smog-forming nitrogen oxide emissions 90 percent below California Air Resources Board 2010 emissions standards, and reduce greenhouse gas emissions by 15 percent. This can help improve the quality of life for families in communities near transportation corridors. An expanded network of CNG stations gives companies the confidence to invest in more CNG vehicles.

The new station strengthens the network of CNG stations across a key regional goods-movement corridor.

Interview

Bret Lane, President and Chief Operating Officer of SoCalGas

Editor's note: In October 2015, SoCalGas discovered a leak at one of its injection and withdrawal wells at its Aliso Canyon natural gas storage facility located in the northern part of the San Fernando Valley in Los Angeles County. The leak was sealed in February 2016. For more information, visit alisoupdates.com.

Q: It's been a little over a year since the Aliso Canyon incident. Have you learned what caused the leak?

A: While we know generally that the failure came from the well casing in one of the wells, we do not know the specific cause of the failure. About a month before the well was permanently sealed, the California Department of Conservation's Division of Oil, Gas and Geothermal Resources (DOGGR) and the CPUC hired Blade Energy Partners (Blade) to conduct an independent investigation to determine the root cause of the leak. The timing of the root cause analysis is under the control of Blade, DOGGR and the CPUC.

Q: From a risk management standpoint, what has the company been doing to make sure something like this doesn't happen again?

A: Since the well was sealed, SoCalGas has not stopped working to enhance the infrastructure, technology and safety at Aliso Canyon and our other three storage fields.

At Aliso Canyon, we are conducting comprehensive testing of the wells in two phases involving a battery of six different types of tests, some of which are similar to the testing we do on our pipelines. We test the conditions of the well, including the integrity of the well's casing. We install and pressure-test brand new steel tubing, which goes inside the casing. (We've installed more than 40 miles of new tubing so far.) And we monitor the pressure on the tubing and the casing from a control room, 24 hours a day, seven days a week.

Going forward, we will withdraw and inject natural gas at the Aliso Canyon storage field through the newly installed inner steel tubing, and only at wells that have passed all tests and have been approved for use by DOGGR. In addition, we are also now operating wells at a reduced pressure, further increasing the margin of safety.

We are also implementing a suite of advanced monitoring technologies and practices that will allow for early detection of leaks at all or our storage fields. These include in-person patrols of every well several times each day; increased training for our employees and contractors; and daily scans of each well with infrared thermal-imaging cameras, which can detect even the tiniest leak by sensing minute temperature differences.

We submitted a risk management plan to DOGGR that includes ongoing physical assessments and monitoring of each well at Aliso Canyon.

Q: Since the leak, SoCalGas has not been allowed to add (inject) natural gas to the Aliso Canyon storage field and yet there have been no major interruptions in service. Is natural gas storage still needed, especially given the growing amount of battery storage in California?

A: The short answer is yes, gas storage is still critical. While we have not been injecting gas, it has sometimes been necessary to use the natural gas already stored in the field. As an example, although this past winter was quite mild, we did have a period of particularly cold weather. During that time, the demand for natural gas was so high that, for several days, we needed to withdraw some of the gas remaining at Aliso to meet natural gas and electric reliability needs in our service territory.

We also take a longer view. As the state of California moves to 33-percent and, ultimately, 50-percent renewable power, we need to be able to continue supplying energy when the sun goes down and solar energy rapidly drops from the electric grid. Quick-starting, efficient natural gas-fired power plants meet these energy needs. And natural gas storage has played – and will continue to play – a vital role in supplying the natural gas needed by these power plants. Battery storage just hasn't been developed to the point where it will be able to meet that huge demand.

In fact, we're developing our own battery. We are working with the University of California at Irvine to test a "power-to-gas" system which uses excess renewable energy to create hydrogen. We can mix hydrogen, which is carbon-free, into our natural gas pipelines and storage fields to create a lower-emissions fuel source. So in a way, SoCalGas' natural gas infrastructure could be thought of as the world's largest renewable-energy battery.

Q: SoCalGas has made a commitment to fully mitigate the actual natural gas lost from the Aliso Canyon leak. Have you made any progress on this?

A: We remain committed to fully mitigate the emissions impact of the actual natural gas lost during the leak. We're working with various regulatory agencies and are looking at different solutions, including capturing fugitive methane from active waste sources such as dairies and wastewater facilities.

"We need to be able to supply energy when the sun goes down and solar energy rapidly drops from the electric grid."

Northern San Fernando Valley in Los Angeles County, Calif.

Fresh water represents just **one percent** of our total water withdrawal.

The Energía Costa Azul LNG terminal in Baja California, Mexico.

Water

We use billions of gallons of water, primarily to regasify LNG and cool our power plants. We minimize our use of fresh water, particularly in areas where water availability is a concern. Our water policy may be found at sempra.com.

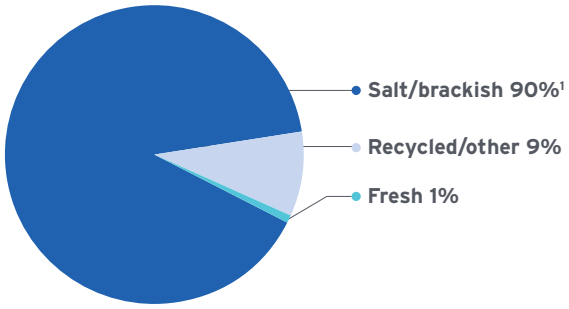
In 2016, Sempra Energy and its businesses withdrew 21.9 billion gallons of water: 19.7 billion gallons of salt/brackish or seawater, primarily used to support LNG operations; 2 billion gallons of reclaimed or recycled water, primarily used to support power generation operations; and 200 million gallons of fresh water, primarily used in employee-occupied facilities and to support our Midstream operations. Fresh water represents just one percent of our total water withdrawal.

We returned 90 percent of the water we withdrew to the source.

We have minimized our need for fresh water in our power generation operations by using dry-cooling technology and reclaimed or recycled water:

- SDG&E's 566-megawatt Palomar Energy Center in Escondido, Calif., uses reclaimed water (treated wastewater) in the electric generation process. This saved 680 million gallons of fresh water in 2016.
- SDG&E's 485-megawatt Desert Star power plant near Boulder City, Nev., uses dry-cooling, which requires only 10 percent of the water used by traditional wet-cooled power plants.
- IEnova's 625-megawatt Termoeléctrica de Mexicali power plant in Mexicali, Mexico, uses treated sewage, cleaned in our own water treatment facility, to cool the plant. As a result, we saved more than 1.3 billion gallons of fresh water in 2016.

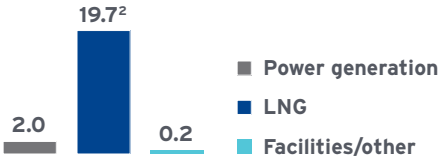
Water withdrawal by source (2016)



[1] These operations do not have a significant impact on water supplies, because the vast majority of this water is withdrawn from and returned to the ocean.

Water withdrawal by use (2016)[1]

Billions of gallons



[1] While we continue to improve data collection related to water use, these numbers do not yet account for all aspects of our operations, including natural gas pipeline testing at our California utilities.

[2] These operations do not have a significant impact on water supplies, because the vast majority of this water is withdrawn from and returned to the ocean.

Xeriscape project cuts water use 60 percent at SoCalGas facility

In August 2016, SoCalGas celebrated the completion of its San Dimas Customer Call Center's new landscaping project. The utility replaced water-intensive turf with drought-tolerant plants such as agaves, kangaroo paws and red yucca. These colorful shrubs and plants provide a vivid contrast to boulders and a dry stream bed, designed to capture storm water run-off.

As a result of the new xeriscape landscaping, the facility expects to reduce its yearly water usage 60 percent – a savings of 1.6 million gallons of water annually.

Installing drought-tolerant plants can save millions of gallons of water over time.

We are committed to reducing hazardous waste, and expect to see significant reductions over time.

Waste and recycling

At Sempra Energy, we reduce our waste, reuse materials, extend the life of equipment and expand our recycling programs.

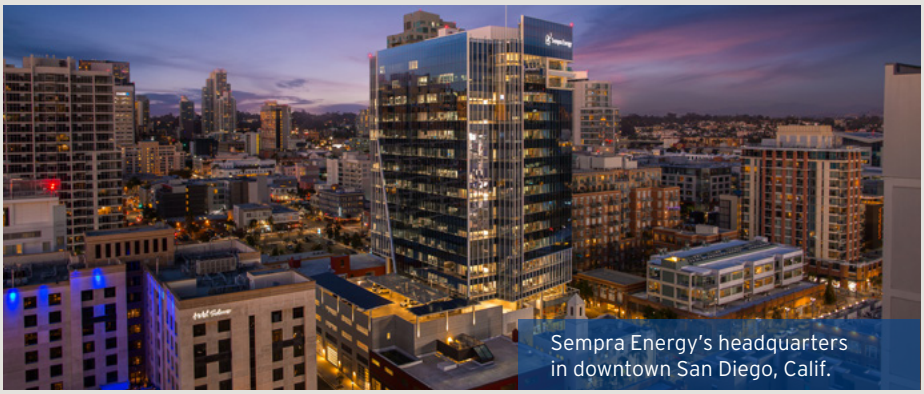
In 2016, Sempra Energy and its businesses generated and disposed of 97,585 tons of waste. Our waste and recycling programs diverted nearly 14,350 tons of material from landfills, generating more than $3.8 million in revenue. Electric transformers, meters and other metals constituted 84 percent of this total by weight.

In 2016, we generated 5,575 tons of hazardous waste and managed and disposed of it according to applicable laws. We are committed to reducing hazardous waste, and expect to see significant reductions over time. The amount of hazardous waste we generate fluctuates from year to year as we complete the clean-up of historic manufactured gas sites, and replace other energy infrastructure.

Sempra Energy businesses encourage customers to switch to paperless billing (e-billing) to reduce the amount of paper we use. As of December 31, 2016, 3.1 million, or 34 percent, of our customers have opted for paperless billing.

We recycle electric transformers, meters and other metals.

Reducing waste and improving efficiency at Sempra Energy headquarters



Sempra Energy's headquarters in downtown San Diego, Calif.

In mid-2015, Sempra Energy moved into a new 16-story headquarters in downtown San Diego. In 2016 we began to realize many of the benefits of the LEED-Gold* structure:

- A 58-percent reduction in electricity use. The building includes a 52-kilowatt solar panel system and abundant natural light.
- A 19-percent reduction in water use. The building was designed for optimal water efficiency, with drought-tolerant landscaping, irrigation efficiency technologies and a bio-filtration system to process storm water.
- A central location, close to public transportation options; dedicated parking for electric vehicles and carpools; and numerous bike-friendly features (the building was certified "bicycle-friendly" by the League of American Bicyclists in 2016).

In addition, employees eliminated more than 200,000 single-use plastic water bottles from the waste stream by using water-bottle refilling stations.

These efficiencies and other operational savings make Sempra Energy's new building cost-neutral, and are a point of pride for headquarters-based employees.

*Leadership in Energy and Environmental Design, or LEED, is a rating system devised by the United States Green Building Council to evaluate the environmental performance of a building.

In 2016, our businesses made **$53 million** in capital expenditures to comply with environmental laws and regulations.

Environmental compliance

Every Sempra Energy business is accountable for following all applicable environmental regulations and laws, and for obtaining required permits and fulfilling the requirements of such permits. Environmental compliance programs include detailed plans; extensive training and monitoring; and performance evaluation.

In 2016, our businesses made $53 million in capital expenditures to comply with environmental laws and regulations. This included costs to mitigate or prevent future environmental contamination or extend the life, increase the capacity, or improve the safety or efficiency of existing operations.

In 2016, 97 percent of all agency inspections resulted in no notice of violation (NOV). We received 22 NOVs and paid $9,012 in fines and penalties, not including settlements. Six of the NOVs were related to operational protocols; five were related to air quality and emissions; five were related to permitting and reporting; four were related to waste; and two were related to water discharge. Compliance personnel at our businesses review, respond to, correct, or, in some cases, challenge the NOVs they receive.

In February 2017, SoCalGas announced that it would pay $8.5 million as part of a settlement with the South Coast Air Quality Management District to resolve a dispute related to the Aliso Canyon natural gas leak. A description of SoCalGas' response to this incident can be found in our 2015 corporate responsibility report. Additional detail on Aliso Canyon leak-related fines, penalties and settlements may be found in our 2016 10-K.

Environmental compliance

	2013	2014	2015	2016
Agency inspections	395	443	563	638[1]
Internal compliance assessments and audits[2]	569	422	422	325
Notices of violation (NOV)[3]	8	10	22	22
Percentage of agency inspections with no NOV issued	98	98	96	97
Fines and penalties[4]	$1,734	$1,810	$50,343	$9,012

[1] Agency inspections increased after the leak at SoCalGas' Aliso Canyon natural gas storage field.

[2] 2013 number updated due to a reporting error. The number of internal compliance assessments and audits may vary from year-to-year due to adjustment of inspection cycles as determined by risk assessments.

[3] Self-reported violations are not included.

[4] Does not include settlements. The amount of fines and penalties paid varies from year to year depending on the nature of the violation and the timing of its resolution.

Biodiversity

At Sempra Energy, we are committed to protecting and preserving biodiversity in the areas where we do business, and have restored or protected more than 13,000 acres of land.

We work to meet or exceed laws and regulations related to biodiversity. Our biodiversity policy articulates how we integrate biodiversity considerations into the planning, construction and operation of energy facilities, balancing the protection of sensitive plant and animal life with our needs as a business. We also work with independent organizations to verify sustainable practices related to land use and biodiversity.

Sempra Renewables' protection of birds and bats provides a good example of how our businesses protect biodiversity.

During project planning, employees identify major biodiversity issues that might have an adverse impact on plant or animal species. They meet with regulatory agencies such as the U.S. Fish & Wildlife Service, Federal Aviation Administration, relevant state agencies and local land use authorities to gain understanding of agency concerns. They initiate field studies (raptor nesting surveys, wetland studies and habitat assessments) and provide input on construction plans, including the need for buffers around areas of concern, such as nests. Project employees also prepare a bird and bat conservation strategy to ensure compliance with federal and state laws and regulations throughout the life of the project. All of these activities take place before construction begins.

During construction, the project group monitors construction activities to ensure protection of biological resources. This includes training construction personnel; minimizing disturbance of critical habitat, roosting areas or wetlands; and ensuring that a biologist or environmental health and safety specialist is present to monitor construction activities, particularly during nighttime work.

During operation, the project group assesses the ongoing impact of the project and makes operational adjustments. Changing conditions, such as new weather patterns, might impact the facility – and might consequently impact plant and animal life. Employees visit the site to help ensure compliance, and stay up-to-date on regulatory changes that might impact the project.

Our other businesses implement similar conservation plans, protecting a wide range of animal species including the desert tortoise, Belding's savanna sparrow, snowy plover, California least tern, light-footed clapper rail, coastal California gnatcatcher, least-Bell's vireo, southwestern willow flycatcher, arroyo toad, Peninsular bighorn sheep and many plant species.

Sempra Energy companies have restored or protected more than **13,000** acres of land.

Construction of the Gasoducto Sonora pipeline in Sonora, Mexico.

Supply chain impacts

Sempra Energy's largest supply chain impacts* are from the natural gas and electricity we procure. Our core business is delivering energy to the approximately 32 million consumers served by our five utilities.

In 2016, of the electricity they delivered, SDG&E purchased 78 percent; Chilquinta Energía purchased 100 percent; and Luz del Sur purchased 95 percent.

Our businesses purchase natural gas through short- or long-term contracts that specify the source of the gas – as well as from supply aggregation points, exchanges and electronic bulletin boards that do not specify the source of the gas. Given the complexity of the natural gas supply chain, Sempra Energy advocates for a consistent set of standards for all natural gas producers.

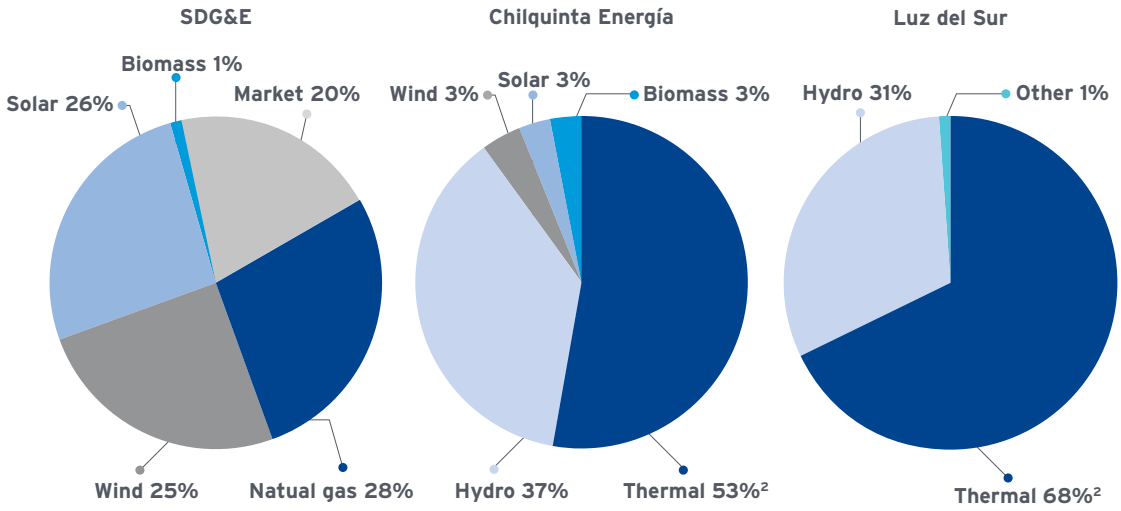
Thousands of suppliers provide goods and services (beyond electricity and natural gas) to Sempra Energy and its businesses. They provide pipelines and cable to deliver natural gas and electricity; steel and wood for electric towers and poles; meters to measure customer usage; and office supplies and equipment. They also provide tree trimmers, construction workers, security guards, accountants and other professionals.

What impact do our suppliers have on the environment? And how can we encourage them to minimize this impact?

At our California utilities, prospective suppliers bidding on requests for proposals (RFPs) over a specific dollar amount are required to answer sustainability-related questions, and their responses are factored into the decision-making process. We continue to work to find new ways to help suppliers reduce their impact on the environment.

*Supplier selection and monitoring is on page 21, Supplier diversity is on page 60.

Purchased power[1]



[1] Purchased power does not include power that the utility generated and delivered to its customers.

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

Responsible natural gas production

Hydraulic fracturing is the process of using pressurized fluid to fracture rock formations and extract natural gas or oil. The use of hydraulic fracturing has expanded in recent years due to technological advances.

Sempra Energy businesses purchase, store, transport and distribute natural gas. We do not extract, or produce, natural gas in any significant quantities. Nevertheless, we support reasonable rules and regulations to ensure that all natural gas producers are operating to a standard that protects consumers, the environment, the energy industry and our nation's access to this abundant supply of domestic energy. Our hydraulic fracturing position statement outlines this view.

Our Responsible Natural Gas Production Working Group is a group of company experts evaluating how Sempra Energy and its businesses can work with key suppliers to minimize the impact of natural gas extraction. We are evaluating existing industry partnerships, voluntary standards and other initiatives to determine how this can inform our practices and purchasing policies.

In addition, SoCalGas is a member of the Natural Gas Collaborative for Responsible Supply, a group of natural gas purchasers interested in promoting the safe and sustainable development of natural gas. The group is working to develop a common set of questions to evaluate and publicly report on the environmental performance of natural gas producers, addressing stakeholder concerns about hydraulic fracturing

We support the safe, sustainable development of natural gas.

Our stakeholders

An employee at the SoCalGas natural gas compressor station in Ventura, Calif.

Employees 46
- Engagement
- Safety
- Employee benefits and wellness
- Diversity and inclusion
- Training and development
- Labor relations

Customers and communities 54
- Engagement
- Human rights
- Public safety
- Energy affordability and customer-assistance programs
- Reliability
- Economic impact
- Philanthropy and community involvement

Business partners and suppliers 60

Regulators 61

Investors and shareholders 61

Employees

Sempra Energy's more than 16,000 employees serve approximately 32 million consumers worldwide. When our employees are trained, challenged and empowered to take initiative, our business thrives.

Engagement

What determines how our employees work; whether they want to stay at Sempra Energy; and whether they recommend our company as a desirable place to work?

Employee engagement is a combination of satisfaction, loyalty and pride. Every other year, our employees are asked to complete a survey to assess their engagement. Employee confidentiality is maintained: The survey is administered by a third party, and results are aggregated, shared and discussed with supervisors who have five or more direct reports. Supervisors with fewer direct reports receive higher-level results.

Employees at all levels from across the company look closely at survey results and take action to make changes or improvements where needed.

Results from the 2015 survey were published in our 2015 report, and indicated strong engagement: Eighty-five percent of respondents stated they "agree" or "strongly agree" with the statement "Overall, I am extremely satisfied with this company as a place to work." Results from 2017 will be published in our 2017 report, to be released in 2018.

Safety

At Sempra Energy, we are not satisfied unless each employee and contractor returns home safely after every workday. We encourage a safety-focused culture in which each individual feels responsible for their own safety as well as the safety of their co-workers.

In 2016, our employee safety performance continued to improve, and we saw decreases in both the rate of recordable injuries and illnesses and the rate of injuries that resulted in time away from work.

The most common employee injuries at Sempra Energy's businesses are body sprains and strains. We work to minimize these types of injuries through specific training programs on body mechanics and ergonomics. We also focus on safety during pre-work briefings before crews head out to the field. And at safety stand-downs, we review safety lessons learned.

Safety best practices, near misses, alerts and messages are shared within and across our businesses.

Safety performance

	2013	2014	2015	2016
Employee work-related fatalities	1	0	1	0
Employee OSHA recordable injury rate[1]	2.41	2.41	2.35	2.31
Employee lost work time case rate[2]	0.88	0.8	0.77	0.73
Contractor work-related fatalities	1	0	1	0
Contractor OSHA recordable injury rate[3]	n/a	n/a	n/a	0.8

[1] The number of recordable injuries or illnesses per 100 full-time workers.

[2] The number of lost time cases per 100 full-time workers.

[3] Data from 2013-2015 are not available.

SDG&E personnel inspect a pipeline in San Diego County, Calif.

SDG&E launches, expands safety programs

San Diego Gas & Electric launched or expanded several safety programs in 2016.

The utility increased its use of certain types of safety communications, including safety-related e-mails, printed bulletins with safety awareness messages and digital signage. It expanded the Environmental and Safety Compliance Management Program (ESCMP) training to include site managers, with the purpose of supporting the required year-end ESCMP certification of compliance with training and inspections.

SDG&E also tested a fleet telematics program which monitors the location, movement, status and behavior of fleet vehicles. Driver safety remains a critical component of both employee and customer safety at the utility.

Sempra headquarters designated as a bike-friendly business

The League of American Bicyclists designated Sempra Energy's headquarters building as a bike-friendly business in mid-2016.

A dedicated team of Sempra Energy cyclists worked to develop and implement initiatives that met the League's "5E" requirements for a bike-friendly business: education, encouragement, engineering, enforcement (safe riding) and evaluation.

Building amenities include secure bike racks, a bike repair station and a locker/shower area set aside for cyclists.

Employee benefits and wellness

Sempra Energy offers its employees* a highly competitive compensation and benefits package:

- Market-competitive base pay plan
- Performance-based incentive program
- Flexible benefit program that allows employees to choose the benefits that best meet their needs and the needs of their families, including:
  - Medical, dental and vision insurance;
  - Life insurance, long-term disability, parental leave, long-term care and accidental death & dismemberment insurance;
  - A cash balance pension plan;
  - A 401(k) savings plan with company match;
  - Tuition reimbursement of up to $5,250 per year;
  - Paid time off including vacation, flex days, holidays and sick leave;
  - An employee assistance program that includes the opportunity for clinical counseling, financial consultation, pre-retirement counseling, child-care consultations, elder-care consultations and legal counseling;
  - Volunteer/giving incentive programs; and
  - A mass-transit/parking subsidy.

Employee wellness improves recruitment, employee retention and performance. We provide a range of resources and programs to help our employees live healthier lives. Programs and amenities vary by location, but are more widely available at facilities with more employees:

- On-site fitness facilities, lockers and showers and subsidized fitness classes encourage employees to incorporate exercise into their workday routine.
- Bicycle-friendly amenities and financial incentives promote the use of biking to work as a healthy, lower-stress alternative to commuting by automobile.

*Sempra Energy businesses offer similar benefits, as detailed on their websites.

Wellness programs help improve employee recruitment and retention.

- When feasible, flexible work schedules, including the option to telecommute, allow for a beneficial balance between work and personal commitments. Backup dependent care provides a safety net for employees experiencing a scheduling conflict with regular childcare or eldercare providers.
- Occasional lunch and learn sessions teach employees about topics such as stress management, heart health and nutrition.
- Ergonomics consultations and free on-site flu vaccinations protect employee health and reduce sick days. Sit-stand desks are available at many locations.

Sempra Energy's wellness, by the numbers* (2016)

2,928
flu shots administered

27
fitness classes offered weekly

$1.7 million
invested in wellness programs

*Includes California operations only.

Mentoring Moments

In 2016, the company launched a speed-mentoring program called "Mentoring Moments." The program, based on a similar national "minute mentoring" program, was championed by Sempra Energy's Chairman, President and CEO Debra Reed.

At the first "Mentoring Moments" program, employees were divided into small groups. Each group spent 10 minutes with each of the 14 diverse company executives who had volunteered for the program. Employees had the opportunity to access a range of company leaders; get exposure to meaningful advice; and build relationships across the company.

Mentoring can play a critical role in career development. The wisdom gained from such interactions can be instrumental for both personal and professional growth.

Mentoring can play a critical role in career development.

Achieving diversity and inclusion in the workplace requires commitment, hard work and effort at every level. More than **300 employees** serve on company diversity and inclusion councils.

Diversity and inclusion

At Sempra Energy, we are a stronger company when we value, respect and include people with different perspectives and diverse backgrounds. A wide range of factors influence and impact every one of our employees, including race, color, national origin, ancestry, ethnicity, education, age, marital status, veteran status, sexual identity and orientation, gender, gender identity or expression, religion, spiritual beliefs, mental and physical capabilities, and life experiences.

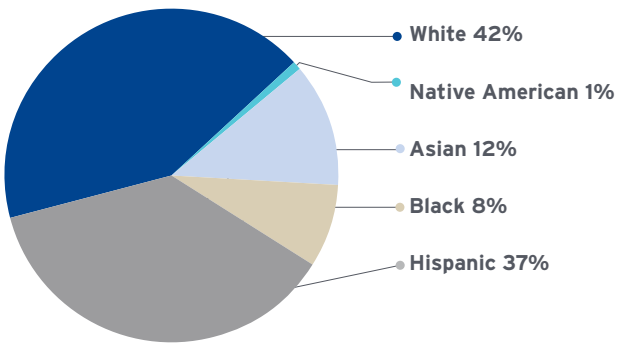
By respecting each employee, we create a workplace where unique perspectives yield new ideas — and stronger business performance becomes possible.

Our Discrimination- and Harassment-Free Workplace Policy formalizes our approach. Our executive commitment is a signed statement of our leadership's belief in the importance of diversity and inclusion. Our chairman, president and CEO is a signatory to a "CEO Action for Diversity and Inclusion" pledge, and has committed that we will welcome different points of view, discuss tough issues and share successes and challenges in our workplace.

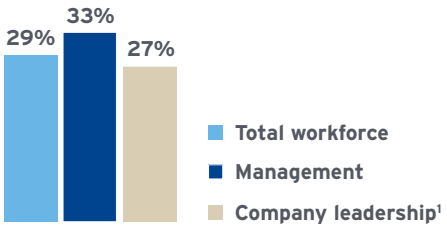
Achieving diversity and inclusion in the workplace requires commitment, hard work and effort at every level. More than 300 employees serve on our corporate-wide diversity council or on one of 13 local diversity and inclusion councils. These councils establish priorities and develop employee-focused programs and initiatives. They work to build diversity awareness, celebrate differences and foster an environment of acceptance, respect and inclusion. In 2016, in seminars, meetings (including at Sempra Energy's annual Diversity and Inclusion Summit) and at lunchtime gatherings, employees discussed a wide range of diversity- and inclusion-related topics including: working across generations; an introduction to LGBT; disability in the workplace; bipolar disorder; gender and gender identity; faith in the workplace; diversity and innovation; diversity and safety; and implicit bias.

Our workforce demographics provide strong evidence of our commitment to, and success with, diversity and inclusion. When job openings occur, we cast a wide net to build a diverse pool of candidates.

U.S. workforce diversity (2016)

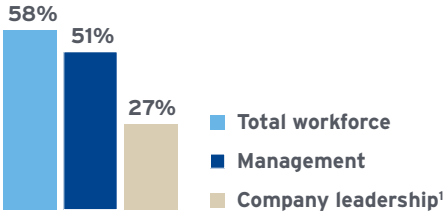


Women in workforce (2016)



[1]Employees in positions that place them in the top 2 percent of the company.

People of color in U.S. workforce (2016)



[1]Employees in positions that place them in the top 2 percent of the company.

Across the company, women make up 29 percent of the workforce and 33 percent of management. (By comparison, across the utility industry in the U.S., women make up 25 percent of the workforce and 21 percent of management.) Since 2010, the percentage of people of color in our U.S. workforce has increased from 53 percent to 58 percent; the U.S. utility average is 25 percent. Sempra Energy has received several awards for its approach to, and record of achievement on, diversity and inclusion issues.

Training and development

Employee development at Sempra Energy is an employee-driven process utilizing company-provided tools and resources. We encourage each employee to create a career development plan, including both short- and long-term goals, and discuss it with their manager.

MyInfo is an online portal and one-stop shop for any learning or development an employee needs. It includes performance reviews, short- and long-term career goals, required and completed training, compensation, benefits and other information. Using MyInfo, employees may also indicate their career interests and receive notification when matching jobs are posted.

For training, employees may access a menu of online and instructor-led courses that strengthen competencies in areas critical to the company's continued success, as identified in the Sempra Energy Leadership Model. These include leading change, inspiring trust, building talent, acting strategically and exercising good judgment. We also encourage employees to pursue educational opportunities outside of work; our Professional Development Assistance Program provides up to $5,250 per year to cover the educational expenses of employees working toward a degree or certificate. More than 450 employees participated in this program in 2016.

In 2016, Sempra Energy tested a suite of tools to assess the effectiveness and value of employee training and talent-development programs. Human resources personnel used pre- and post-training surveys to measure changes in quality, productivity, customer satisfaction, employee engagement and costs. Managers participating in the pilot program reported that training was responsible for an improvement of approximately 10 percent in their employees' job performance. The company plans to expand the use of these analytical tools in 2017.

The company also supports mentoring including through its "M-Power" program, a diversity-focused mentoring program designed to help employees set professional goals, work in a diverse workplace, network, transfer knowledge and prepare for career advancement.

Labor relations

Nearly one-half of Sempra Energy's U.S. employees, and 27 percent of its non-U.S. employees, are represented by labor unions. We respect our partnerships with unions and work with them to achieve business results that benefit our employees, our businesses and the communities we serve. We also seek opportunities to collaborate with our unions.

More information on the labor unions representing employees at each of our businesses may be found in our 2016 Annual Report on Form 10-K.

Chilquinta Energía was recognized for its excellent safety culture.

Chilquinta Energía recognized for safety culture based on respect and transparency

Sempra Energy utility Chilquinta Energía was recognized in 2016 for its excellent safety culture. The company received the Preventive Management Award from the Carlos Vial Espantoso Foundation and the Chilean Safety Association for its commitment to the health and safety of its employees as demonstrated by a culture focused on accident prevention. The distinction celebrates companies that build labor relations based on respect and transparency.

Chilquinta Energía's safety management is based on a system of inspections, preventive meetings, drills and training via the Center of Applied Technical Competencies (CCTA). All Chilquinta Energía employees and contractors must become certified by the CCTA. As a result of this program, accident rates at the company are well below industry standards.

Collaborating with labor unions on employee safety and health at SoCalGas

Safety committees discuss operations-related issues and opportunities for improvement.

A natural gas pipeline inspection. In 2016, employee safety performance continued to improve.

Working with employees and employee organizations is a critical part of our approach to safety throughout the Sempra Energy family of companies.

At SoCalGas, "safety champions" committees convene at the operating base or regional level and discuss operations-related issues and opportunities for improvement. The companywide Safety Leadership Team is made up of labor union officers and members of safety departments. They discuss topics of concern to the represented employees. The SoCalGas Executive Safety Committee meets quarterly at locations around the service territory with all levels of management and employees to discuss safety issues.

All safety committees have the same objectives:

- To provide continuous focus on employee safety and health as a high priority;
- To empower all employees to take an active role in managing safety;
- To clearly define and then promote (through education and training) each employee's responsibility and accountability for safe behaviors and work practices;
- To educate all employees about the impacts of unsafe behavior on the individual, family, co-workers and the company;
- To identify company-wide injury and accident trends and recommend best safety practices for implementation;
- To improve the effectiveness of district and department joint safety committees; and
- To form closer alliances with customers about safety hazards employees face in the work environment.

We engage with stakeholders to listen to their concerns and incorporate their suggestions and ideas whenever and wherever feasible.

Customers and communities

Sempra Energy's businesses serve approximately 32 million consumers worldwide. Our businesses operate utilities in California, Mexico, Chile and Peru, meeting the energy needs of a wide range of residential, commercial and industrial customers.

Engagement

Our reputation depends on strong customer and community relationships throughout our operations. Company leaders work with public affairs and community relations personnel to ensure the strength of these relationships.

Our utilities connect with their customers through mail, email, door hangers, advertising, social media and news media. They provide information and answer questions through websites and customer call centers. They review customer research and satisfaction-survey results; host community forums or information sessions; and arrange face-to-face meetings. Information on customer-assistance programs may be found on page 56.

Our infrastructure businesses also engage with people and communities. Project construction provides a good example: Beginning in the early stages of project development, they make sure local residents and business owners have an opportunity to ask questions and make suggestions. As development continues, they keep them informed through face-to-face meetings, community open house events and project update newsletters and other communications. Once development is complete, they continue to engage with stakeholders to ensure community needs are being met.

In addition to these ongoing activities, Community Advisory Councils made up of a cross section of community leaders meet periodically to provide input on topics relevant to a specific business or project.

Human rights

Throughout all of our operations, and across all stakeholder groups, Sempra Energy respects human rights. We engage with stakeholders to listen to their concerns and incorporate their suggestions and ideas whenever and wherever feasible.

Our approach to human rights is specified in several corporate policies, including our Discrimination and Harassment-Free Workplace policy. We are also in the process of developing a human rights policy.

We recently completed a human rights assessment which included benchmarking and an analysis of our operations for areas of potential risk and opportunity. According to the assessment, the siting and operation of certain energy infrastructure projects might have a moderate impact on local communities, property owners and in some cases indigenous peoples. Local, regional and national governments and permitting agencies in the countries where we operate (U.S., Mexico, Chile and Peru) require us to follow specific protocols and to have appropriate public outreach and mitigation plans in place to account for these potential impacts.

Our reputation depends on strong customer relationships throughout our operations.

Public safety

At Sempra Energy, our top priority is safety. Nothing is more important to us than keeping our employees and customers safe.

As of December 31, 2016, our operations span 15 U.S. states, four countries and two continents. We operate five energy utilities, 119,500 miles of natural gas pipeline and 49,881 miles of electric transmission and distribution lines. We also operate two LNG receipt terminals, six underground storage facilities capable of storing 179 billion cubic feet of natural gas, and five natural gas-fired power plants. With our partners, we operate more than 850 wind turbines and nearly 6,800 acres of photovoltaic solar facilities.

Protecting the public from dangerous contact with energy facilities is an important objective and an ongoing challenge – we do not control the actions of third parties which may place them in such contact. In 2016, there were 79 injuries and six fatalities alleged to involve company pipes, poles and wires, construction areas, motor vehicles and other facilities.* Due to pending litigation and the confidential nature of settlements, Sempra Energy cannot provide further information on these incidents.

Our businesses manage the safe operation of their assets, with oversight provided by their own boards of directors, as well as the Environmental, Health, Safety and Technology Committee of Sempra Energy's corporate board of directors. Public safety-related areas of focus include, but are not limited to:

- Educating customers about energy safety: Customers should avoid contact with electric and natural gas equipment, including poles, transformers, pipes and wires. We produce and disseminate safety education materials and encourage customers to "Dial 8-1-1 before you dig," so our U.S. utility personnel can mark the location of buried utility-owned gas pipelines or electric lines free of charge;
- Testing and replacing natural gas pipelines; retrofitting or replacing valves to enable automatic or remote controlled response; and installing new technology for better system monitoring;
- Replacing and upgrading electrical cables, wires and other equipment;

* Does not include incidents alleged to involve the Aliso Canyon leak.

Pipeline testing and methane sensors at SoCalGas

In September 2016, SoCalGas announced the successful test of a system that captures natural gas associated with pipeline testing and replacement – natural gas that previously would have been vented to the atmosphere. The system, now in use, uses a gas compressor to move gas from the pipeline into a mobile compressed natural gas (CNG) storage system, also known as a "tube trailer." SoCalGas has been able to collect or mitigate an average of 85 percent of the gas per testing event.

SoCalGas also completed the successful test of sensors that read methane levels every five minutes near high-pressure pipelines. The prototype module utilized commercially available sensors and sent signals through SoCalGas' advanced meter radio system to communicate with the testing operations center to improve early leak detection. Sensors are now being installed at certain locations around SoCalGas' service territory.

"Stop the job"

At SoCalGas, a safety best practice is "Stop the job." This means that anyone has the power to stop a job – at any time – if they feel something is not right or if they see a condition that might be unsafe. The job can only be restarted once all concerns have been addressed and safety precautions have been taken.

Employees are encouraged to share and report safety issues because the culture at SoCalGas promotes an approach of continuous learning: Something bad could have happened, how can we learn from it? This focus can be empowering because employees know they can get involved in problem solving in a positive way.

- Installing smart-grid devices to help identify the location of an outage;
- Repositioning electric line underground (where it is not exposed to vehicles, tree branches, Mylar balloons or other potential sources of trouble); and converting power poles from wood to steel, further improving system strength, safety and reliability;
- Engaging in wildfire prevention and preparedness, including vegetation management (tree trimming); extensive weather forecasting; and employee training programs; and
- Assessing and mitigating vulnerabilities related to deliberate cyber or physical attacks on energy infrastructure.

It is vital that our utilities restore natural gas and electric service quickly and safely in the aftermath of a major disaster or emergency. Employees train for such events alongside government officials and first responders. They develop and update contingency plans and emphasize the importance of emergency preparedness to their customers: Uninterrupted access to energy is not guaranteed, so they encourage each customer to develop a written emergency plan and practice implementing it.

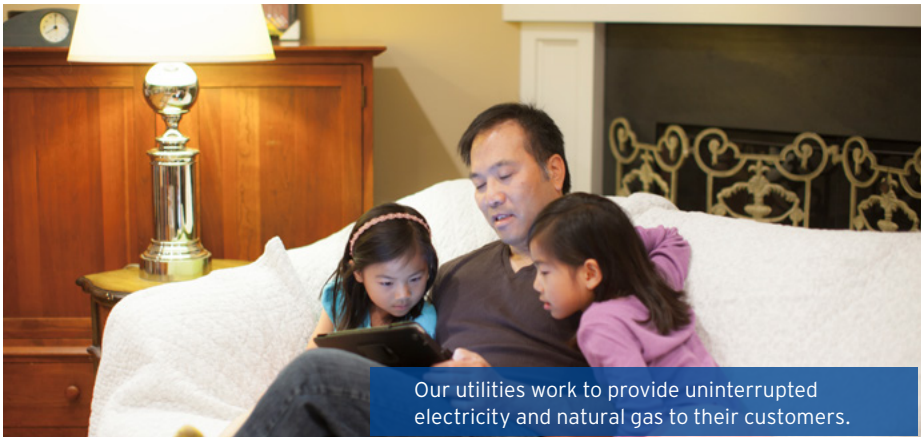
Energy affordability and customer-assistance programs

Public agencies, such as the CPUC, make the rules that determine how our utilities may operate, including what rates they may charge. These regulators try to balance the growing needs and demands of utility customers with the utilities' obligation to earn a reasonable rate of return.

Sempra Energy's utility businesses abide by these rules and regulations. They offer programs that help both business and residential customers use less energy: Energy-efficiency retrofits, appliance upgrades and on-bill financing of energy upgrades are a few examples. Level-payment plans help customers smooth out monthly volatility in energy bills. Time-of-use rates, "Reduce your Use" days, and other programs and options provide utility customers with additional money-saving options.

In addition to these customer choices, our California utilities also provide customer-assistance programs to help low-income or medically qualified customers pay their energy bills and/or reduce their energy use. The CPUC establishes enrollment targets for these programs, which include California Alternate Rates for Energy (CARE) ratepayer assistance, the Medical Baseline Allowance program and the Energy Savings Assistance Program (ESAP). Utility performance against these targets is detailed in our "Goals & results" chart on page 65.

Our South American utilities also provide customer assistance. In 2016, Chilquinta Energía made more than 28,000 payment agreements with customers who were having trouble paying their energy bills. Luz del Sur provides a 30- to 40-percent discount for three to six months to approved low-income customers.



Our utilities work to provide uninterrupted electricity and natural gas to their customers.

Reliability

Our utilities build, operate, maintain and improve their energy infrastructure to provide electricity and natural gas service to their customers. When service interruptions occur, our utilities identify the location or source of the outage and work to restore service quickly and safely. Vehicle crashes, equipment failure and construction activity are some common causes of power outages and natural gas service disruptions.

SDG&E has been recognized for 11 consecutive years with the "Best in the West" award for electric reliability from PA Consulting, an independent consulting firm. A typical SDG&E customer experiences one power outage every other year. On average, an outage lasts about one hour.

Both Chilquinta Energía and Luz del Sur provide service reliability that far exceeds standards established by local regulators. In 2016, for the sixth consecutive year, Chilquinta Energía ranked No. 1 in terms of quality electricity supply among electric distribution utilities in Chile with more than 120,000 customers.

Electric reliability performance (2016)[1]

	SAIDI[2]: (Average outage duration, in minutes)	SAIFI[3]: (Average number of outages per customer, per year)
SDG&E	72	0.61
Chilquinta Energía	649	3.98
Luz del Sur	540	2.34

[1] System operating conditions and methodology for calculating performance vary significantly from country to country.

[2] System Average Interruption Duration Index.

[3] System Average Interruption Frequency Index.

Reliability is also important to our natural gas utilities. They develop short- and long-term demand forecasts to help ensure that they are prepared to meet the needs of their customers. As an example, SoCalGas delivers natural gas to companies that own and operate natural gas-fired power plants. If SoCalGas does not have an adequate supply of natural gas, these power plants might need to curtail their operations, leading to widespread electricity outages.

Storing energy improves reliability

In March 2016, SDG&E announced that it signed a contract with Hecate Energy Bancroft LLC for a new 20-megawatt energy storage facility. And in August, the utility received regulatory approval to build two energy storage projects with a combined capacity of 37.5 megawatts in San Diego County.

Energy storage improves grid reliability: Batteries charge when there is an abundance of solar or wind power and provide energy in the early evening when demand for electricity peaks.

The CPUC has set energy storage targets for SDG&E: 165 megawatts of energy storage must be operational by 2024; 330 megawatts must be operational by 2030.

SDG&E's Whenergy® shifts energy demand, gives customers options

The CPUC is changing California's electricity pricing to reflect when customers use it. SDG&E calls this Whenergy.

Whenergy prices are based on the time of day and season. By shifting heavy energy use to less costly times, customers can reduce their energy costs while also reducing demand on the electric grid.

Whenergy is already in effect for SDG&E's business customers. The utility plans to roll out Whenergy for residential customers over the next two years.

Economic impact

A company's financial performance matters, not just to its employees and shareholders, but also to its suppliers, contractors, customers and communities it serves, as well as the governmental jurisdictions where it does business. The economic value a company creates is distributed to these stakeholders in the form of wages and benefits; payments for operating costs; dividends to shareholders; payments to governments in the form of fees or taxes; and contributions to community organizations.

In 2016, Sempra Energy generated direct economic value of nearly $11 billion,* of which $8.8 billion* was distributed to stakeholders:

Economic value[1]

For year ended December 31, 2016
Dollars in millions
Unaudited

Economic value generated	
Revenues	$10,183
Interest and dividend receipts	51
Proceeds from sale of assets and investments	763
	$10,997
Economic value distributed	
Operating costs	$4,922
Employee wages and benefits	1,971
Shareholders and providers of capital	588
Payments to government	517
Shareholder dividends	749
Community investments	15
	$8,762
Economic value retained (generated-distributed)	**$2,235**

[1] Mobile Gas and Wilmut Gas data are included through the date of sale.

Philanthropy and community involvement

Sempra Energy's philanthropy and employee volunteerism are aligned with our business priorities. We focus on the environment because we recognize that our business operations have an impact. We contribute to community development and education because strong economies support a higher quality of life – and effective schools can develop skilled workers and wise leaders. And we prioritize emergency preparedness to help make sure our communities are ready to respond to unforeseen events.

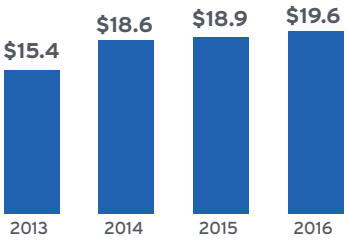
* These figures were determined according to the guidelines provided by the Global Reporting Initiative.

Employee volunteers from SDG&E work in the City Heights neighborhood of San Diego, Calif.

We contribute to community development and education because strong economies support a higher quality of life – and effective schools can develop skilled workers and wise leaders.

Sempra Energy and Sempra Energy Foundation community giving[1]

In millions of dollars



[1] Community giving includes charitable giving to fully charitable entities as well as nonprofit civic and community groups.

Examples of community involvement include:

- As part of its Environmental All-Stars program, nearly 100 SDG&E volunteers worked with local residents to repair and renovate nine homes during the annual City Heights Facelift. The team painted, cleaned parkways and planted drought-resistant succulents and trees, helping to improve the neighborhood.
- Employees from the Gas Engineering division at SoCalGas supported the Team Science Summer Science Camp. Employees helped design and teach several science workshops where students applied scientific, technical, engineering and mathematical principals to real-world situations. A contribution from the company also helped provide scholarships for area children to attend the camp.
- The Mesquite Solar Wildlife Oasis is located adjacent to Sempra Renewables' Mesquite Solar complex. A donation from the company, in partnership with the education nonprofit Wildlife for Tomorrow, allowed more than 3,000 K-12 students from the Phoenix area to visit this living lab, where they had the opportunity to learn about the desert habitat and wildlife.
- 150 employees from across the Sempra Energy family of companies biked more than 2,000 miles, gave more than 500 hours of their time and raised more than $185,000 to fund cancer research in the San Diego area, in collaboration with the nonprofit Pedal the Cause.

In 2016, the company recorded **$3.3 million** in employee giving and employee volunteer time of **22,000 hours.**

The Sempra Energy Foundation encouraged employees to contribute to relief agencies in the wake of three natural disasters in 2016: the floods in Louisiana, the earthquake in Ecuador and Hurricane Matthew in the Southeastern U.S. The Foundation and employees gave $140,000 to help people impacted by these events.

Sempra Energy business IEnova's foundation donated school supplies, toys and clothing, and provided financial support to foster homes in Mexicali, Ensenada, Hermosillo, Chihuahua, Torreón, Monterrey and Mexico City.

Sempra Energy supports employee giving through programs like the Sempra Energy Giving Network, a 501(c)(3) nonprofit organization that allows employees to set up direct payroll contributions to charities of their choice. The company also supports employee volunteerism through programs such as the Volunteer Incentive Program, which allows employees who give at least 10 hours of their personal time to a nonprofit organization or school to request a grant from the Sempra Energy Foundation to that nonprofit organization or school.

In 2016, the company recorded $3.3 million in employee giving and employee volunteer time of 22,000 hours.

Business partners and suppliers

Business partners and suppliers are critical to Sempra Energy's success. We often submit bids in collaboration with business partners who can play an important role in managing or implementing different phases of a project. We depend on suppliers for equipment, parts and services essential to system reliability.

Once a supplier has been selected, supply chain managers in our businesses monitor their performance and work with them to find ways to limit their environmental impact. For a description of how we engage with suppliers, please see the Supplier selection and monitoring section of this report on page 21. For a description of how we manage the environmental impacts of our suppliers and supply chain, please see the Supply chain impacts section of this report on page 44.

At our California utilities, supplier diversity includes working with Diverse Business Enterprises (DBEs). It is important that the companies that provide materials and support to SoCalGas and SDG&E reflect the communities these utilities serve. In 2016, 42 percent* and 43 percent of total spending at SoCalGas and SDG&E, respectively, went to DBEs, far exceeding the guidelines established by the CPUC.

* Excludes highly specialized companies brought in to help stop the Aliso Canyon leak. Including leak-related expenditures, SoCalGas' DBE spend was 35 percent.

Regulators

Sempra Energy's utility customers want safe, clean, reliable and affordable energy. Our utilities want to provide this service, while earning a reasonable rate of return for their efforts. Regulators work to balance these sometimes-competing requirements: Although our utilities may have the exclusive right to provide energy service to their customers, regulators set rules that specify where that energy comes from; how much infrastructure is needed to deliver it; and how much it should cost. Regulators review project proposals, issue permits and oversee utility procurement and delivery of natural gas and electricity.

Regulatory affairs, government affairs and other employees work to ensure regulators understand our company's perspective on a wide range of relevant issues. They participate in public meetings, provide testimony and interact with regulators via phone, email or in-person meetings. Strict rules of conduct govern how we engage with regulators and how these interactions must be reported.

For more information on how our utilities are regulated, please see page 9 of our 2016 Annual Report on Form 10-K.

Investors and shareholders

A description of how we engage with shareholders can be found on page 13 of this report, in the Governance section.

Sempra Renewables' Copper Mountain Solar 1 facility in Boulder City, Nev.

About this report

Chilquinta Energía utility trucks head back to base after a full day's work.

Report overview 62

Reporting framework and materiality

Data verification and report review

Performance data 64

Goals & results 65

Disclaimers 68

Forward-looking statements

Reconciliation of Non-GAAP Measures (Unaudited)

GRI index 71

Content index 85

Report overview

Sustainable Growth is Sempra Energy's corporate responsibility report for the year 2016.

To sustain our growth, we must serve our customers while ensuring we have the raw materials, the public support, the market demand and the skilled employees we will need over the long term.

Reporting framework and materiality

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. A detailed GRI index can be found on page 71.

Report data includes all businesses and facilities where we have operational control. Additionally, report data includes Cameron LNG, a joint venture that we do not control but that will have a significant impact on our earnings. Data are based on our percent ownership. Report data does not include the Mobile Gas and Willmut Gas utilities; the sale of these facilities was announced in April 2016 and completed in September. Other data exclusions or additions are noted.

Sempra Energy's corporate responsibility report focuses on material issues.

In 2016, we reviewed industry-specific materiality assessments conducted by the Sustainability Accounting Standards Board (SASB) and the Electric Power Research Institute (EPRI) and updated the material issues we address (developed in 2014, based on feedback from approximately 400 stakeholders) as follows:

1. Employee engagement and safety (p. 46-47)
2. Ethics and governance (p. 12-16)
3. Rates and reliability (p. 56-57)
4. Customers and communities (p. 54-56, 58-60)
5. Compliance (p. 20, 42)
6. Water (p. 38-39)
7. Climate change and emissions (p. 22-35)
8. Environmental impact (p. 30-34, 38-45)
9. The future (p. 4-9, 19, 22-28, 34-35, 41, 45, 46-52, 55, 57, 58)
10. Supply chain (p. 21, 44-45, 60)

This report provides detailed descriptions of our approach and performance related to each of these topics.

Please let us know how we can improve our sustainability reporting to better meet your needs.

Contact:

Molly Cartmill
Director, Corporate Social Responsibility
619-696-2000
corporateresponsibility@sempra.com.

Data verification and report review

We use an online system to collect performance data and supporting documentation from our corporate headquarters and principal businesses. We conduct periodic internal audits to review data accuracy. We report some data publicly to government agencies, and obtain third-party verification of a subset of this data in the year following publication.

Greenhouse gas emissions for 2015 were verified as follows: SDG&E, by GHD Services, Inc.; SoCalGas, by Lloyd's Register Quality Assurance, Inc.; and Termoeléctrica de Mexicali, by Cameron-Cole, LLC. The verification process for 2016 greenhouse gas emissions will be completed later in 2017.

The Environmental, Health, Safety and Technology Committee of Sempra Energy's board of directors reviewed this report prior to its publication.

Performance data

	2013	2014	2015	2016
Business and governance				
Revenues (millions of dollars)	10,557	11,035	10,231	10,183
Earnings (millions of dollars)	1,001	1,161	1,349	1,370
Earnings per diluted share (dollars)	4.01	4.63	5.37	5.46
Total assets (millions of dollars)	37,165	39,651	41,150	47,786
Number of board directors	13	13	12	11
Number of independent board directors	12	12	11	10
Independent board directors that are women or minorities (% of independent directors)	50	50	45	50
Ethics and compliance helpline calls	167	202	260	232
Environment				
Renewable energy deliveries (% of previous year total sales)[1]	23.6	31.9	35.2	43
Agency inspections	395	443	563	638[2]
Notices of violation (NOV)[3]	8	10	22	22
Inspections with no NOV issued (% of total inspections)	98	98	96	97
Fines and penalties (dollars)[4]	1,734	1,810	50,343	9,012
Internal compliance assessments and audits[5]	569	422	422	325
Scope 1 greenhouse gas emissions (million metric tons CO_2e)	7.5	6.7	8.1[6,8]	4.7[7]
Scope 2 greenhouse gas emissions (million metric tons CO_2e)	0.226	0.308	0.250[6]	0.212[7]
Scope 3 greenhouse gas emissions (million metric tons CO_2e)[9]	56.4	58.9	54.5	52.8
CO_2 emissions rate for power generation (lbs CO_2/megawatt-hour)[10]	708	694	649	561
NO_x emissions from power generation (tons)	464	388	355	235
NO_x emissions rate from power generation (lbs/megawatt-hour)[10]	0.06	0.05	0.05	0.05
SO_2 emissions from power generation (tons)	21	16	16	8
SO_2 emissions rate from power generation (lbs/megawatt-hour)[10]	0.003	0.002	0.002	0.002
Total water withdrawal (billions of gallons)[11]	31.9	31.4	27.9	21.9
Returned water (billions of gallons)[11]	28.7	28.2	25	19.7
Hazardous waste (tons)[12]	2,901	1,947	5,073	5,575
Our stakeholders				
Number of employees	17,100	17,000	17,400	16,600
Employee work-related fatalities	1	0	1	0
Recordable injury case rate (per 100 full-time workers)	2.41	2.41	2.35	2.31
Employee lost work time case rate (per 100 full-time workers)	0.88	0.80	0.77	0.73
Women in workforce (% of total workforce)	29	29	28	29
Women in management (% of management employees)	33	33	33	33
People of color in workforce (% of U.S. employees)	56	56	57	58
People of color in management (% of U.S. management)	47	48	50	51
Spending with diverse business enterprises (% of total spending)[13]	45	46	44	43[14]
Community giving (millions of dollars)	15.4	18.6	18.9	19.6

[1] Power delivered to SDG&E customers only, based on SDG&E's renewable-portfolio-standard reporting, subject to CPUC revision.

[2] Agency inspections increased after the leak at SoCalGas' Aliso Canyon natural gas storage field.

[3] Self-reported violations are not included.

[4] Does not include settlements. The amount of fines and penalties paid varies from year to year depending on the nature of the violation and the timing of its resolution.

[5] 2013 number updated due to reporting error. The number of internal compliance assessments and audits may vary from year-to-year due to adjustment of inspection cycles as determined by risk assessments.

[6] 2015 greenhouse gas emissions data have been updated following an independent verification of the data.

[7] 2016 greenhouse gas emissions data are undergoing third-party verification and may be updated upon completion of the analysis.

[8] Includes an estimated 2.1 million metric tons CO_2e equivalent from the Aliso Canyon leak.

[9] Data includes emissions from power purchased and delivered to SDG&E customers and emissions from our customers' combustion of natural gas. The 2016 number also includes employee air travel.

[10] Emissions rate for power generation on an equity-share basis. Data from Chilquinta Energía's 8-megawatt peaker plant are not included.

[11] While we continue to improve data collection related to water use, these numbers do not yet account for all aspects of our operations, including natural gas pipeline testing at our California utilities.

[12] Hazardous waste generated increased in 2015 in part due to increased remediation activity and pipeline testing. In 2016, an asphalt replacement project also increased hazardous waste numbers.

[13] Covers spending on diverse business enterprises at SDG&E and SoCalGas only.

[14] Excludes highly specialized companies brought in to help stop the Aliso Canyon leak. Including leak-related expenditures, the utilities' overall DBE spend was 38 percent.

Goals & results[1]

● Met ◑ Partly/in Progress ○ Below target

2016 Goals		2016 Results	2017 Goals
Emissions reduction			
Decrease our CO_2 emissions rate for power generation by at least **10 percent** by 2016 compared to a 2010 baseline.	●	Decreased rate by **23 percent**	Decrease our CO_2 emissions rate for power generation by at least **35 percent** by 2021 compared to a 2010 baseline.
Renewable energy and innovation			
Provide an average of **25 percent** of customers' electricity from renewable sources of energy by 2016 and **33 percent** by 2020 (SDG&E)	●	Provided **43 percent**[2] from renewable sources of energy	Provide an average of **50 percent** of customers' electricity from renewable sources by 2030 (SDG&E)
Invest in **2,028 megawatts** of renewable power by 2018 (Sempra Renewables)	●	Completed **422 megawatts**, bringing the company's wholly and jointly owned operating renewables portfolio up to **2,297 megawatts**	Invest in **2,945 megawatts** of renewable power by the end of 2021 (68 percent of our generation portfolio) (Sempra Renewables & IEnova)
n/a			Develop or interconnect at least **165 megawatts** of energy storage on the system by 2024 and **330 megawatts** by 2030 (SDG&E)
n/a			By 2025, develop the charging infrastructure to support **150,000 electric vehicles** (SDG&E)
n/a			By 2020, **51 percent** of fleet will run on alternative fuels (SoCalGas)
n/a			By 2020, **22 percent** of fleet will run on alternative fuels (SDG&E)
Install approximately **6 million natural gas smart meters** by end of 2017 (SoCalGas)	◑	**5.8 million meters installed**	Install approximately **6 million natural gas smart meters** by end of 2017 (SoCalGas)
n/a			By 2030, facilitate the conversion of **160,000 heavy-duty trucks** from diesel to natural gas (SoCalGas)
n/a			**Decrease carbon** in SoCalGas' pipelines by introducing renewable natural gas to the Core natural gas procurement portfolio by 2025
Energy efficiency			
Aim for the following, through customer energy efficiency programs (SDG&E):		Saved:	Aim for additional savings through customer energy efficiency programs (SDG&E):
324 gigawatt-hours in energy savings	●	**346 gigawatt-hours**	**304 gigawatt-hours** in energy savings
57 megawatts of demand reduction	●	**93 megawatts**	**50 megawatts** of demand reduction
3.2 million therms of natural gas saved	●	**3.6 million therms**	**3.3 million therms** of natural gas saved
Aim for the following, through customer energy efficiency programs (SoCalGas):		Saved:	Aim for additional savings through customer energy efficiency programs (SoCalGas):
29.1 million therms of natural gas saved	●	**36 million therms**	**30.3 million therms** of natural gas saved
Reduce facility electricity consumption per square foot compared to 2015 usage (SDG&E)	●	Reduced consumption **0.4 percent** over 2016, a nearly 30 percent reduction from the 2003 baseline	**Reduce facility electricity consumption** per square foot compared to 2016 usage, while adding infrastructure to charge 300 employee electric vehicles (SDG&E)
Reduce facility electricity consumption **5 percent** in 2016 compared 2015 (SoCalGas)	○	Reduced consumption **3 percent**	Reduce facility electricity consumption **5 percent** in 2017 compared 2016 (SoCalGas)

Goals & results[1] (continued)

● Met ◑ Partly/in Progress ○ Below target

2016 Goals		2016 Results	2017 Goals
Water			
Reduce facility water consumption compared to 2015 levels and **20 percent** less than baseline year of 2010 (SDG&E)	○	Increased consumption **1.8 percent**	Reduce consumption compared to 2016 and use **20 percent** less than consumed in our baseline year of 2010 (SDG&E)
Reduce facility water consumption **5 percent** compared to a 2007 baseline (SoCalGas)	●	Reduced consumption **11 percent**	Maintain at least a **5 percent** reduction in facility water consumption compared to a 2007 baseline (SoCalGas)
Safety and Public Safety			
Achieve a consolidated recordable injury rate[3] of **2.31 cases** per 100 full-time workers	●	Achieved rate of **1.78 cases**	Maintain a culture of safety, **striving for zero injuries**[4]
n/a			Decrease overall pipeline damage rate (per 1,000 service tickets) by **15 percent** compared to a 2016 baseline (SoCalGas & SDG&E)
n/a			Complete enhanced well integrity inspections on **100 percent** of underground storage wells by the end of 2019 (SoCalGas)
n/a			Replace approximately **800 miles of pipeline** at SoCalGas and **100 miles** at SDG&E by 2021 as part of the Pipeline Safety Enhancement Program (PSEP) (SoCalGas & SDG&E)
n/a			Complete high pressure pipeline inspections on **1,700 miles** of pipeline at SoCalGas and **120 miles** at SDG&E by 2021 as part of the PSEP (SoCalGas & SDG&E)
n/a			Install and retrofit more than **100 automated control valves** and test/replace more than **180 miles** of high pressure pipeline by 2021 as part of the PSEP (SoCalGas & SDG&E)
Reliability			
Limit average duration of electricity outages (SAIDI) to:			Limit average duration of electricity outages (SAIDI) to:
60 minutes (SDG&E)	○	**72 minutes**	**63 minutes** (SDG&E)
553 minutes (Chilquinta Energía)	○	**649 minutes**	**553 minutes** (Chilquinta Energía)
643.1 minutes (Luz del Sur)	●	**540 minutes**	**390 minutes** (Luz del Sur)
Limit average number of electricity outages (SAIFI) to:			Limit average number of electricity outages (SAIFI) to:
0.51 outages (SDG&E)	○	**0.61 outages**	**0.51 outages** (SDG&E)
5.11 outages (Chilquinta Energía)	●	**3.98 outages**	**5.11 outages** (Chilquinta Energía)
2.9 outages (Luz del Sur)	●	**2.34 outages**	**3 outages** (Luz del Sur)
Customer assistance programs			
Enroll **90 percent** of eligible customers in California Alternate Rates for Energy program (SDG&E)	○	Enrolled **77 percent**	Enroll **90 percent** of eligible customers in the California Alternate Rates for Energy program (SDG&E)
Enroll **90 percent** of eligible customers in California Alternate Rates for Energy program (SoCalGas)	○	Enrolled **82 percent**	Enroll **90 percent** of eligible customers in California Alternate Rates for Energy program (SoCalGas)
Weatherize **20,316 homes** through the Energy Savings Assistance Program (SDG&E)	○	Weatherized **19,792 homes**	Weatherize **20,316 homes** through the Energy Savings Assistance Program (SDG&E)

Goals & results[1] (continued)

● Met ◑ Partly/in Progress ○ Below target

2016 Goals		2016 Results	2017 Goals
Weatherize **136,836 homes** through the Energy Savings Assistance Program (SoCalGas)	○	Weatherized **69,811 homes**	Weatherize **110,000 homes** through the Energy Savings Assistance Program (SoCalGas)
Diverse Business Enterprises (DBEs)			
Aim for **40 percent** in spending with diverse business enterprises (DBEs) (SDG&E)	●	Achieved **43 percent**	Aim for **40 percent** in spending with diverse business enterprises (DBEs) (SDG&E)
Aim for at least **38 percent** in spending with diverse business enterprises (DBEs) (SoCalGas)	●	Achieved **42 percent**[5]	Aim for at least **38 percent** in spending with diverse business enterprises (DBEs) (SoCalGas)
Community Giving			
Contribute **1 percent** of annual pretax income to our communities	●	Contributed **1.07 percent**	Contribute **1 percent** of annual pretax income to charities[6]

[1] If goal is not Sempra-wide, the relevant business unit is indicated in parentheses in the Goals columns.

[2] These results subject to review and audit by the CPUC and other regulatory agencies.

[3] Goal includes not only employees, but also contractors at our utilities in Mexico, Chile and Peru, where they perform a very substantial proportion of the work.

[4] Year-to-year safety performance can be found in the Performance data table on page 64.

[5] Excludes the highly specialized companies brought in to help stop the Aliso Canyon leak. Including leak-related expenditures, SoCalGas' DBE spend was 35 percent.

[6] Our methodology has changed and going forward our goal will be to give one percent of pretax income to fully charitable entities.

Disclaimers

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 date that this report was first published. We assume no obligation to update or revise any forward-looking statement as a result of new information, future events or other factors.

In this report, when we use words such as "believes," "expects," "anticipates," "plans," "estimates," "projects," "forecasts," "contemplates," "assumes," "depends," "should," "could," "would," "will," "confident," "may," "can," "potential," "possible," "proposed," "target," "pursue," "outlook," "maintain," or similar expressions, or when we discuss our guidance, strategy, plans, goals, 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; 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; 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, computer system outages, 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; capital markets and economic conditions, including the availability of credit and the liquidity of our investments; and 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; the ability to win competitively bid infrastructure projects against a number of strong and aggressive competitors; expropriation of assets by foreign governments and title and other property disputes; the impact on reliability of San Diego Gas & Electric Company's (SDG&E) electric transmission and distribution system due to increased amount and variability of power supply from renewable energy sources;

the impact on competitive customer rates due to the growth in distributed and local power generation and the corresponding decrease in demand for power delivered through SDG&E's electric transmission and distribution system and from possible departing retail load resulting from customers transferring to Direct Access and Community Choice Aggregation; and other uncertainties, some of which may be difficult to predict and are beyond our control.

We caution you not to rely unduly on any forward-looking statements. You should review and consider carefully the risks, uncertainties and other factors that affect our business as described herein and in our most recent Annual Report on Form 10-K and other reports that we file with the Securities and Exchange Commission.

Reconciliation of Non-GAAP Measures (Unaudited)

Reconciliation of Sempra Energy GAAP Earnings and Diluted Earnings Per Share (EPS) to Sempra Energy Adjusted Earnings and Adjusted Earnings Per Share (Unaudited)

We prepare the consolidated financial statements in conformity with U.S. GAAP. However, management may use earnings and earnings per share adjusted to exclude certain items (adjusted earnings and adjusted earnings per share) internally for financial planning, for analysis of performance and for reporting of results to the Board of Directors. We may also use adjusted earnings and adjusted earnings per share when communicating our financial results and earnings outlook to analysts and investors. Adjusted earnings and adjusted earnings per share are non-GAAP financial measures. Because of the significance and/or nature of the excluded items, management believes that these non-GAAP financial measures provide a meaningful comparison of the performance of Sempra Energy's business operations to prior and future periods.

Non-GAAP financial measures are supplementary information that should be considered in addition to, but not as a substitute for, the information prepared in accordance with U.S. GAAP. The table that follows reconciles adjusted earnings and adjusted earnings per share to Sempra Energy Earnings and Diluted Earnings Per Common Share, which we consider to be the most directly comparable financial measures calculated in accordance with U.S. GAAP, for the years ended December 31, 2016, 2015 and 2014.

Sempra Energy adjusted earnings and adjusted earnings per share

(Dollars in millions, except per share amounts)

	Pretax amount	Income tax expense (benefit)(1)	Non-controlling interests	Earnings	Diluted EPS
			Year ended December 31, 2016		
Sempra Energy GAAP Earnings				$1,370	$5.46
Excluded items:					
Remeasurement gain in connection with GdC	$(617)	$185	$82	(350)	(1.39)
Gain on sale of EnergySouth	(130)	52	–	(78)	(0.31)
Permanent release of pipeline capacity	206	(83)	–	123	0.49
SDG&E tax repairs adjustments related to 2016 GRC FD	52	(21)	–	31	0.12
SoCalGas tax repairs adjustments related to 2016 GRC FD	83	(34)	–	49	0.19
Impairment of investment in Rockies Express	44	(17)	–	27	0.11
Impairment of TdM assets held for sale	131	(20)	(21)	90	0.36
Deferred income tax expense associated with TdM	–	8	(3)	5	0.02
Sempra Energy Adjusted Earnings				$1,267	$5.05
Weighted-average number of shares outstanding, diluted (thousands)					251,155
			Year ended December 31, 2015		
Sempra Energy GAAP Earnings				$1,349	$5.37
Excluded items:					
Gain on sale of Mesquite Power block 2	$(61)	$25	–	(36)	(0.14)
SONGS plant closure adjustment	(26)	11	–	(15)	(0.06)
Sempra Energy Adjusted Earnings				$1,298	$5.17
Weighted-average number of shares outstanding, diluted (thousands)					250,923
			Year ended December 31, 2014		
Sempra Energy GAAP Earnings				$1,161	$4.63
Excluded item:					
SONGS plant closure loss(2)	$6	$15	–	21	0.08
Sempra Energy Adjusted Earnings				$1,182	$4.71
Weighted-average number of shares outstanding, diluted (thousands)					250,655

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

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

Global Reporting Initiative (GRI) index

Sempra Energy follows the GRI standards, an internationally-recognized standardized framework for disclosing economic, environmental and social performance. The 2016 report qualifies at the in accordance- core level. We also provide information on additional standard disclosures where data is available.

General standard disclosures

Standard number	Description	Response	Omissions
102-1	Name of the organization	Sempra Energy	
102-2	Primary brands, products, and services	Strategy and assets 2016 10K	
102-3	Location of organization's headquarters	San Diego, CA	
102-4	Number and name of countries where the organization has significant operations	We have operations in the United States, Mexico, Chile and Peru (4).	
102-5	Nature of ownership and legal form	Sempra Energy is an investor-owned corporation. Common shares trade on the New York Stock Exchange under the symbol "SRE".	
102-6	Nature of markets served (including geographic breakdown, sectors served, and types of beneficiaries)	Strategy and assets 2016 Annual Report 2016 Statistical Report	
102-7	Scale of the reporting organization (employees, operations, net sales, capitalization, quantity of products/services)	Strategy and assets Performance data 2016 Statistical Report	
102-8	Workforce	Employees Contractors perform a variety of services for our companies. This includes office support services and field support including vegetation management, construction, trenching, etc. In the U.S. approximately 550 of our 13,000 employees work a part-time schedule. Data related to our workforce is compiled through the annual corporate responsibility data collection process. In general human resources information is available in a system called MyInfo which houses a variety of data and information.	Employees by employment type and by gender
102-9	Describe supply chain	Business partners and suppliers Supply chain impacts	Data for diverse supplier spend is currently only available for our California utilities.
102-10	Significant changes from previous report regarding size, structure, and ownership	Year in review 2016 10K In late 2016 we reorganized our businesses into a new structure: Sempra Utilities and Sempra Infrastructure. Sempra Utilities includes SDG&E, SoCalGas, Chilquinta Energia and Luz del Sur. Sempra Infrastructure includes our business in Mexico, IEnova, Sempra LNG & Midstream and Sempra Renewables. Sempra Renewables acquired the 100-megawatt Apple Blossom wind project in Michigan from Geronimo Energy, LLC. In September, IEnova entered into an agreement to purchase the Ventika I and Ventika II wind-generation facilities in Nuevo León, Mexico. Sempra LNG & Midstream sold EnergySouth, the parent company of natural gas utilities Mobile Gas and Willmut Gas, to Spire Inc., formerly known as The Laclede Group, Inc.	

Standard number	Description	Response	Omissions
102-11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Risk management	
102-12	External charters, principles, initiatives	These are referenced throughout the 2016 Corporate Responsibility Report.	
102-13	Memberships in associations	On sempra.com we publish [http://www.sempra.com/about/governance/political-engagement/] a list of trade organizations and business memberships which received annual dues and payments of $20,000 or more.	
102-14	Statement from senior decision-maker	Letter from our Chairman, President and CEO	
102-15	Key impacts, risks and opportunities	Risk management The environment Performance data Goals and Results 2016 10k	
102-16	Values, principles, standards and norms of behavior such as code of conduct and code of ethics	Codes of conduct: - Board of directors and senior officers - Employees - Standards for an ethical workplace - Suppliers - Extension of Sempra conduct standards Corporate values	
102-17	Mechanisms for advice and concerns about ethics	Values and code of conduct	
102-18	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight	Governance 2017 Proxy Statement Board Committee Charters The board's Environmental, Health, Safety and Technology Committee assists the board in overseeing the Company's programs and performance related to these matters. The committee also reviews the annual corporate responsibility report prior to its publication and is briefed on related data and content. This committee's focus is consistent with the board's general oversight role of corporate responsibility and stewardship.	
102-20	Identify executive-level position with responsibility for economic, environmental and social topics and reporting to highest governance body.	Dennis Arriola, Executive Vice President - External Affairs and Corporate Strategy, also serves as Sempra Energy's Chief Sustainability Officer. Arriola reports directly to Debra Reed, Chairman and CEO of Sempra Energy.	
102-21	Mechanisms for consultation between stakeholders and highest governance body on economic, environmental and social topics	2017 Proxy Statement	
102-22	Composition of the highest governance body and its committees	2017 Proxy Statement	
102-23	Indicate whether the Chair of the highest governance body is also an executive officer, and if so, reason for this arrangement.	Sempra Energy shareholder proposals have included the request that the company adopt a policy that our chairman of the board be independent and not a current or former executive of the company. Our board of directors believes we are best served by retaining the board's flexibility to determine on a case-by-base basis whether the chief executive officer or an independent director should serve as chairman of the board. In November 2012, our board of directors elected CEO Debra Reed as chairman of the board. During those periods in which our chairman is not independent, an independent lead director is appointed by the independent members of our board. William C. Rusnack has served in this role since 2009. Sempra Energy has established a strong lead director role, consistent with input from shareholders.	

Standard number	Description	Response	Omissions
102-24	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	Corporate Governance Guidelines	
102-25	Processes in place for the highest governance body to ensure conflicts of interest are avoided	Corporate Governance Guidelines 2017 Proxy Statement	
102-26	Role of highest governance body in setting purpose, values, and strategy	Governance	
102-27	Collective knowledge of highest governance body	Governance	
102-28	Process for evaluating the board's own performance	Corporate Governance Committee Charter	
102-32	Highest governance body's role in sustainability reporting	Governance	
102-35	Remuneration policies for highest governance body and senior executives; Linkage between compensation for members of the highest governance body, senior managers, and executives, and the organization's performance	2017 Proxy Statement	
102-36	Process for determining remuneration	2017 Proxy Statement	
102-37	How stakeholders' views are sought and taken into account regarding remuneration and whether they are independent of management	Governance 2017 Proxy Statement	
102-40	List of stakeholder groups engaged by the organization	Engaging, building trust and fostering relationships with our stakeholders leads to a more stable and predictable business environment. These stakeholders include: our 16,600 employees; the 32 million consumers we serve; the hundreds of communities where we do business; regulators, policymakers and concerned leaders in the jurisdictions where we operate; and our shareholders. Governance Employees Customers and communities About this report	
102-41	Percentage of employees covered by collective bargaining agreements	Labor relations Field employees and some technical, administrative and clerical employees are represented by labor unions in their respective countries. Nearly one-half of Sempra Energy's U.S. employees, and 27 percent of our non-U.S. employees, are represented by labor unions. 2016 10K	
102-42	Basis for identification and selection of stakeholders with whom to engage	Governance Customers and communities About this report	
102-43	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	Governance Customers and communities About this report	
102-44	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns	Governance Customers and communities About this report	

Standard number	Description	Response	Omissions
102-45	Entities included in financial statements, and specify which are included/excluded from this report.	Sempra Energy's principal operating units are: **Sempra Utilities** - SDG&E and SoCalGas, which are separate,reportable segments; - South American Utilities which includes Chilquinta Energía in Chile and Luz del Sur in Peru **Sempra Infrastructure** - Sempra Mexico includes IEnova, one of the largest private energy companies in Mexico - Sempra LNG & Midstream develops liquefied natural gas facilities, midstream natural gas infrastructure and natural gas storage - Sempra Renewables is a leading U.S. developer of renewable energy. Together with its partners, the company owns and operates nearly 2,300 megawatts of renewable energy capacity. Information and data on all operating units is included in this report. Limitations are noted per metric within the Content Index omissions column or as footnotes throughout the report.	
102-46	Process for defining report content and topic boundaries	About this report	Partial response.
102-47	List all material topics identified in the process for defining report content	About this report	
102-48	Explanation of the effect of any re-statements of information provided in earlier reports	2015 greenhouse gas emissions data was updated following an independent review. In addition, we updated the number of internal assessments and audits related to the environment in 2013 upon discovery of a reporting error.	
102-49	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	On October 1, 2014, Sempra Natural Gas and its joint venture project partners completed the formation of a joint venture for their investment in the development, construction and operation of a natural gas liquefaction export facility. Our 50.2-percent retained equity in the joint venture, Cameron LNG Holdings, was derived from the contribution of our existing Cameron LNG regasification facility in Hackberry, Louisiana to the joint venture. Given the significance of this project to our future earnings we will report 50.2 percent of the data associated with this facility even though we do not have operational control. 2018 is expected to be the first year of full operations of the liquefaction facility. Report data does not include the Mobile Gas and Willmut Gas utilities; the sale of these facilities was announced in April 2016 and completed in September About this report	
102-50	Reporting Period	Calendar year 2016	
102-51	Date of most recent previous report	June 2016, covering calendar year 2015	
102-52	Reporting cycle	Annual	
102-53	Contact information	Molly Cartmill, Director, Corporate Social Responsibility corporateresponsibility@sempra.com	
102-54	"In accordance" option	About this report	
102-55	Location of GRI Index	GRI Index	
102-56	Assurance	Greenhouse gas emissions for 2015 were verified as follows: SDG&E, by GHD Services, Inc.; SoCalGas, by Lloyd's Register Quality Assurance, Inc.; and Termoeléctrica de Mexicali, by Cameron-Cole, LLC. The verification process for 2016 greenhouse gas emissions will be completed later in 2016. We are working towards assurance for other data in our corporate responsibility report in future years.	

Standard number	Description	Response	Omissions
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Installed capacity (MW) U.S. / Mexico / Chile / Peru Thermal: / / 8 / Natural Gas: 1,194 / 625 / / Wind: 658 / 329.5 / / Solar: 732 / / / Hydro: / / / 100	
EU2	Net energy output broken down by primary energy source and by regulatory regime	Energy output (MWh) U.S. / Mexico / Chile / Peru Thermal: / / 7,022 / Natural Gas: 3,678,063 / 2,697,445 / / Wind: 1,957,516 / 211,411 / / Solar: 994,091 / / / Hydro: / / / 648,527	
EU3	Number of residential, industrial, institutional, and commercial customer accounts	2016 Statistical Report	
EU4	Length of above and underground transmission and distribution lines by regulatory regime	U.S. / Chile / Peru Above ground (miles): 25,359 / 10,470 / 13,957 Underground (miles): 14,432 / 365 / 8,187	
EU5	Allocation of CO_2e emissions allowances or equivalent, broken down by carbon trading framework	Emissions As part of the effort to meet California's legal requirement that GHG emissions be reduced to 1990 levels by 2020, a cap and trade program was adopted. We participate in the program, which is now linked with Québec's cap and trade system. The first auction of vintage 2013 and 2016 allowances took place in November 2012 and quarterly auctions began in February 2013. Cap and trade compliance began in 2013, with the first compliance period covering electric generators, electricity importers and industrial sources that emit more than 25,000 metric tons of CO_2e per year. Phase 2 began in January 2016 and expanded to include distributors of fuels. See https://www.arb.ca.gov/cc/capandtrade/capandtrade.htm for more information.	
103-1	Topic boundaries within the organization	See Appendix	
103-2	Management approach	Strategy and Assets Values and code of conduct Performance data Goals and results Also see references under each material topic.	

Specific standard disclosures

Category: Economic			
Economic performance			
103-2	Management approach	Sempra Energy combines deep industry expertise with rigorous risk management to deliver superior shareholder returns. A company's financial performance matters, not just to its employees and shareholders, but also to its suppliers and contractors; to the customers it serves; and to the communities and governmental jurisdictions where it does business. Year in Review 2016 Annual Report	
201-1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	Customers and communities	

Standard number	Description	Response	Omissions
201-2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Risk management Climate change Sempra's response to the CDP's climate change survey also covers this in detail. Please see www.cdp.net 2016 10K	
201-3	Coverage of the organization's defined benefit plan obligations	2016 Annual Report	
201-4	Significant financial assistance received from government	No significant financial assistance was received from any of the governments in countries where we have operations. 2016 Annual Report	
Market presence: *This topic did not meet our threshold for materiality*			
Indirect economic impacts			
103-2	Management approach	Energy is vital to the communities we serve. We engage with customers and community leaders to identify and discuss potential infrastructure needs and impacts and learn about ways to mitigate them.	
203-1	Development and impact of infrastructure investments and services supported	Customers and communities http://www.semprarenewables.com/our-commitment/community/ http://ienova.com.mx/english/sustainability-community.html	
203-2	Significant indirect economic impacts, including the extent of impacts	Customers and communities http://www.semprarenewables.com/our-commitment/community/ http://ienova.com.mx/english/sustainability-community.html http://sempralng.com/community/	
Procurement practices			
103-2	Management approach	Supply chain impacts Business partners and suppliers	
204-1	Proportion of spending on local suppliers at significant locations of operation	At our California utilities, 66 percent of total supplier spend in 2015 was with suppliers headquartered in California.	Partially reported-only data from California utilities is included.
EU Sector Topic: Availability and Reliability			
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	2016 Annual Report SDG&E Long-Term Procurement Plan	Partially reported-only data from California utilities is included.
EU Sector Topic System efficiency			
EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime	Natural gas — U.S. 7,410; Mexico 7,292	Partially reported, data from 8-megawatt power plant in Chile is not included.
EU12	Transmission and distribution losses as a percentage of total energy	Transmission losses — U.S. 2.04%; Chile 1.12%; Peru 1.94% Distribution losses — U.S. 3.06%; Chile 7.9%; Peru 4.68%	
Anti-corruption			
103-2	Management approach	Code of Business Conduct Values and codes of conduct	
205-1	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	All business units are analyzed for risks associated with corruption.	

Standard number	Description	Response	Omissions
205-2	Communication and training on anti-corruption policies and procedures	To emphasize the importance of ethics and compliance, we require all employees to complete a training curriculum each year, customized according to their position and responsibilities. The courses address topics such as insider trading; Sarbanes-Oxley regulations; anti-corruption, including local laws and the Foreign Corrupt Practices Act; Federal Energy Regulatory Commission Standards of Conduct; California Public Utilities Commission affiliate-compliance rules; safety; harassment-free workplace' and workplace violence. Governance Risk management Code of Business Conduct	
205-3	Confirmed incidents of corruption and actions taken	No incidents of corruption identified.	
Anti-competitive behavior: *This topic did not meet our threshold for materiality, but we are providing some information because of its importance to some stakeholders*			
103-2	Management approach	Federal and state antitrust laws were enacted to promote competition, preserve our private enterprise system and protect the public, including companies like Sempra Energy and its subsidiaries, from predatory conduct and unfair competition. It is the long established policy of Sempra Energy and its subsidiaries (the "Companies") to comply with all laws applicable to their conduct and, specifically, with the antitrust laws. Compliance with the antitrust laws can only further the Companies' goals since those laws are intended to protect and preserve a competitive economy in which private enterprise can flourish. Code of Business Conduct	
206-1	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	There were no legal actions taken for anti-competitive behavior in 2016.	
Category: Environmental			
Materials: *This topic did not meet our threshold for materiality*			
Energy			
103-2	Management approach	At Sempra Energy, our business strategy is directly linked to our forecast that demand for lower-carbon sources of energy will continue to rise. Our commitment to respecting the environment is aligned with our commitment to delivering shareholder value. We promote energy efficiency; develop and operate lower-carbon energy infrastructure; and embrace innovation because these activities position us to succeed in a low-carbon world and help the environment. Strategy and assets Climate change	
302-1	Energy consumption within the organization	See our response to the CDP climate change survey at www.cdp.net	
302-2	Energy consumption outside of the organization	As an energy utility we work to safely and reliably deliver electricity and natural gas. - Kilowatt-hour sales (millions of hours): 36,810 - Total natural gas throughput (billion cubic feet): 1,004	
302-3	Energy intensity	Emissions	
302-4	Reductions in energy consumption	Goals and results	Only data for electricity reduction at SDG&E and SoCalGas employee-occupied facilities is included.

Standard number	Description	Response	Omissions
Water			
103-2	Management approach	Water Water Policy	
303-1	Total water withdrawal by source	Sempra's response to the CDP's water survey also covers this in detail. Please see www.cdp.net. All numbers in billions of gallons: Surface water: 19.7 Ground water: .41 Rainwater: 0 Waste water: 0 Municipal water: .19	We continue to improve data collection around our water use, but these numbers do not yet account for all of our operations.
303-3	Percentage and total volume of water recycled and reused	Several of our facilities utilize recycled water in their operations. For example, SDG&E's 566-megawatt Palomar Energy Center uses reclaimed water (treated wastewater) to generate electricity and Sempra International's 625-megawatt Termoeléctrica de Mexicali power plant uses treated sewage, cleaned in our own water treatment facility, to cool the plant. Water	Partially reported.
Biodiversity			
103-2	Management approach	Biodiversity Biodiversity Policy	
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity	Partially reported, not all data available.
304-2	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Biodiversity	Partially reported, not all data available.
304-3	Habitats protected or restored	2016 Annual Report SDG&E preservation properties IEnova Sustainability Report	Partially reported, not all data available.
304-4	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	- *Coastal California gnatcatcher*: Federal – Threatened; California Department of Fish and Wildlife (CDFW) - Species of Special Concern - *Quino checkerspot butterfly*: Federal - Endangered - *Arroyo toad*: Federal – Endangered; CDFW - Species of Special Concern - *Least Bell's vireo*: Federal and State - Endangered - *Southwestern willow flycatcher*: Federal and State - Endangered - *Barefoot banded gecko:* State – Threatened - *Peninsular bighorn sheep*: Federal and State – Threatened; CDFW - Fully Protected	Data reported is only for our SDG&E operations.
Emissions			
103-2	Management approach	Climate change Emissions	
305-1	Direct greenhouse gas emissions (Scope 1)	Emissions Sempra's response to the CDP's investor survey also covers this in detail. Please see www.cdp.net.	Emissions from electric utility Luz del Sur are not included.
305-2	Indirect greenhouse gas emissions (Scope 2)	Emissions Sempra's response to the CDP's investor survey also covers this in detail. Please see www.cdp.net.	Emissions from electric utility Luz del Sur and Cameron LNG are not included.

Standard number	Description	Response	Omissions
305-3	Indirect greenhouse gas emissions (Scope 3)	Emissions Sempra's response to the CDP's investor survey also covers this in detail. Please see www.cdp.net.	
305-4	GHG Emissions intensity	Emissions	
305-5	Reduction of greenhouse gas emissions	Emissions	
305-7	NOx, SOx, and other significant air emissions by type	Performance data table	
Effluents and waste			
103-2	Management approach	Waste and recycling Environmental Policy	
306-1	Total water discharge by quality and destination	Water Sempra's response to the CDP's water survey also covers this in detail. Please see www.cdp.net	Partially reported, not all data available, including thermal discharges.
306-2	Total weight of waste by type and disposal method	2016 waste disposal (in short tons) Non-hazardous waste recycled: 9,370 Non-hazardous composted: 56 Non-hazardous waste recovered: 14 Non-hazardous waste incinerated: 8 Non-hazardous waste disposed of through deep well injection: 1,834 Non-hazardous waste disposed of in a landfill: 17,434 Hazardous waste recycled: 704 Hazardous waste composted: 0 Hazardous waste recovered: 29 Hazardous waste incinerated: 191 Hazardous waste disposed of through deep well injection: 0 Hazardous waste disposed of in a landfill: 4,384	
306-3	Total number and volume of significant spills	Sempra Energy did not experience any significant spills in 2016.	
Environmental compliance			
103-2	Management approach	Governance Risk management Environmental compliance	
307-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Environmental compliance	
Transport: *This topic did not meet our threshold for materiality*			
Supplier environmental assessment			
103-2	Management approach	Supply chain impacts Business partners and suppliers Supplier Code of Conduct	
308-1	Percentage of new suppliers that were screened using environmental criteria	At our California utilities, SDG&E and SoCalGas, all new suppliers are screened using environmental criteria.	Partially reported. Other U.S. and international operations are not included in this response, we are working to expand our reporting in this area in future years.
308-2	Significant actual and potential negative environmental impacts in the supply chain and actions taken	We are unaware of any actual or potential negative environmental impacts in our supply chain.	
Environmental grievance mechanisms: *This topic did not meet our threshold for materiality*			

Standard number	Description	Response	Omissions
Category: Social			
Employment			
103-2	Management approach	Employees	
401-1	Total number and rates of new employee hires and employee turnover by age group, gender and region	U.S. Employee turnover: 13% Voluntary turnover: 6%	Partially reported. While international operations are not included, we are working to expand our reporting in this area in future years.
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and region	U.S. Eligible to retire in 5 years: 36% Eligible to retire in 10 years: 48%	Partially reported. While international operations are not included, we are working to expand our reporting in this area in future years.
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Sempra Energy is committed to the health and safety of its employees, customers, suppliers and the communities in which we operate. Our suppliers are expected to provide a safe working environment that supports accident prevention and minimizes exposure to health risks. It is the supplier's responsibility to know and understand the health and safety laws and regulations impacting the goods and services they provide.	
Labor/Management relations			
103-2	Management approach	Nearly one-half of Sempra Energy employees are represented by labor unions. We value our association with the unions that represent our employees and work collaboratively with them to achieve results that are beneficial to employees, customers and the Sempra Energy family of companies. At Sempra Energy, we are not satisfied unless every employee and contractor returns home safely after every workday. Our culture of personal responsibility is a critical part of safety performance. Our goal is for each employee and contractor to feel personally responsible and empowered to take care of their safety as well as the safety of those around them. Compliance and Management Systems Employees Customers and communities	
402-1	Minimum notice regarding operational changes, including whether it is specified in collective agreements	2016 Annual Report	
Occupational health and safety			
403-1	Workers representation in formal joint management-worker health and safety committees	Safety Labor relations	Percentage of workers represented by committees
403-2	Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities by region and gender	Employees	
403-4	Health and safety topics in formal agreements	2016 Annual Report	
Training and education			

Standard number	Description	Response	Omissions
103-2	Management approach	Delivering safe, clean, reliable, affordable energy requires significant human capital, creativity and care. When our people are trained, challenged and empowered to take initiative, our business thrives. Employees	
404-1	Average hours of training per year per employee by gender and employee category	Average hours of training and development per FTE in 2016 were 60.	
404-2	Programs for skills management and lifelong learning	Employees	
404-3	Percentage of employees receiving regular performance reviews by gender and employee category	All employees receive regular performance reviews from their manager.	
Diversity and equal opportunity			
103-2	Management approach	Employees	
405-1	Composition of governance bodies and breakdown of employees per employee category according to gender, age, minority group member (other diversity)	Governance Employees	Partially reported.
Sub-category: Human rights			
Non-discrimination: *This topic did not meet our threshold for materiality.*			
Freedom of association and collective bargaining			
103-2	Management approach	Supplier Code of Conduct	
407-1	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	No operations or suppliers identified. 2016 Annual Report Supplier Code of Conduct	
Child labor: *Although this topic did not meet our threshold for materiality, we are providing some information because of its importance to some stakeholders.*			
103-2	Throughout all of our operations, and across all stakeholder groups, Sempra Energy respects human rights. We recently completed a human rights assessment,which included peer benchmarking as well as an analysis of our worldwide operations for areas of potential risk and opportunity.	Customers and communities	
Forced or compulsory labor: *This topic did not meet our threshold for materiality.*			
Security practices: *This topic did not meet our threshold for materiality*			
Rights of indigenous peoples			
103-2	Management approach	Customers and communities	
411-1	Violations of indigenous peoples rights and response and actions taken	No violations have been identified.	
Human rights assessment			
103-2	Management approach	Code of Business Conduct	

Standard number	Description	Response	Omissions
412-1	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments	Human Rights Sempra has adopted Business Codes of Conduct that cover human rights, environment, information disclosure, combating bribery, consumer interests, science, and technology, competition, and taxation. We are also currently completing a human rights mapping and assessment project of our operations that will inform future company actions in this area.	
Subcategory: Society			
Local communities			
103-2	Management approach	Energy is vital to the communities we serve. The infrastructure that delivers this energy includes power poles, substations, service trucks, transformers, valves, meters, pipes and wires. We engage with customers and community leaders to identify and discuss potential infrastructure impacts and learn about ways to mitigate them. Sempra's businesses connect with their customers through mail, email, door hangers, advertising, social media and news media. They host community forums, arrange face-to-face meetings and convene community advisory councils – representative groups of regional leaders who provide input on locally relevant topics. Customer satisfaction surveys provide data that indicate how well Sempra's businesses are serving their customers. With this information, our utilities are able to identify areas where improvement is needed and implement changes to their customer approach, policies and programs. Customers and communities	
413-1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	Customers and communities Given the nature of our business, our subsidiaries are deeply engaged and connected with all of the communities we serve.	Partially reported, not all data available.
Supplier social assessment			
103-2	Management approach	Supplier Code of Conduct Supply chain impacts Business partners and suppliers	
414-1	Total and percent of new suppliers and contractors that have undergone human rights screening	All suppliers are expected to comply with Sempra's Supplier Code of Conduct and all applicable employment laws and regulations, including, but not limited to state, federal and applicable in-country laws and regulations regarding: equal employment opportunity; compensation and benefits; child labor; freedom of association; forced or compulsory labor; workplace harassment and discrimination; working hours; paymen	
414-2	Significant actual and potential negative social impacts in the supply chain and actions taken	We are unaware of any actual or potential negative social impacts in our supply chain.	
Public policy			
103-2	Management approach	Political involvement	
415-1	Total value of political contributions by country and recipient/boundary	Political contributions	
Sub-category: Product responsibility			
Customer health and safety			
103-2	Management approach	Customers and communities	
416-1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Sempra Energy's subsidiaries provide gas and electric services to customers. Impacts of both of these products are assessed.	

Standard number	Description	Response	Omissions
416-2	Total number of incidents of non-compliance with regulations and/or voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	No incidents identified.	
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases	Customers and communities	
Marketing and labeling: *This topic did not meet our threshold for materiality*			
Customer privacy			
103-2	Management approach	Cybersecurity includes the protection of our own operations and activities and the protection of sensitive customer data. The utility industry faces new cybersecurity risks associated with automated metering and smart grid infrastructure. Virtually all SDG&E customers have smart meters. Advanced meter deployment will be completed by 2017 in SoCalGas' service territory. While these new technologies will provide many benefits to customers, including access to their own energy-usage data, both utilities actively monitor, assess and update their systems to avoid cyber breaches. Sempra Energy 2016 10K	
418-1	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	No substantiated complaints identified.	
Socioeconomic compliance			
103-2	Management approach	Governance Environmental compliance Code of Business Conduct	
419-1	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and/or regulations	Environmental compliance	
EU sector topic Access			
EU26	Percentage of population unserved in licensed distribution or service areas	Access to electricity is also an issue in some areas served by our South American utilities, where not everyone is connected to the grid. Peruvian utility Luz del Sur has brought electricity to thousands of Peruvians who live in underprivileged areas through participation in a government program intended to improve economic development and productivity by connecting those communities to electric service.	Partially reported, not all data available.
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime	Number of residential disconnections for non-payment is provided for Sempra's electric and/or natural gas utilities. Chilquinta Energía: 114,457 Ecogas: 3,099 Luz del Sur: 795,325 SDG&E: 40,067 SoCalGas: 129,130	Partially reported, duration of disconnection is not included.
EU28	Power outage frequency	Goals and results	
EU29	Average power outage duration	Goals and results	
EU30	Average plant availability factor by energy source and by regulatory regime	United States / Mexico Natural gas: 86% / 94%	

Appendix: 103-1

Material issue for Sempra	Corresponding GRI Standards topic	Boundary within Sempra	Boundary outside Sempra
Climate change and emissions	Emissions; Energy; Products and services	All	Customers; Elected officials, community leaders, investors and regulators
Compliance	Environmental compliance; Overall; Biodiversity; Effluents and waste; Public policy; Socioeconomic compliance	All	Customers; Elected officials, community leaders, investors and regulators
Customers and communities	Customer health and safety; Customer privacy; Economic performance; Indirect economic impacts; Rights of indigenous peoples; Human rights assessment; Local communities; Access (EU)	All	Customers; Elected officials, community leaders, investors and regulators
Employee engagement & safety	Occupational health and safety; Labor-management relations; Training and education; Diversity and equal opportunity; Freedom of association and collective bargaining	All	Customers; Elected officials, community leaders, investors and regulators
Environmental impact	Emissions; Energy; Products and services; Water; Biodiversity; Effluents and waste	All	Customers; Elected officials, community leaders, investors and regulators
Ethics and governance	Local communities; Anti-corruption; Customer privacy; Labor/management relations; Diversity and equal opportunity; Non-discrimination; Freedom of association; Indigenous rights; Assessment; Access (EU)	All	Customers; Elected officials, community leaders, investors and regulators
Rates and reliability	Local communities; Access (EU) Availability and reliability (EU); System efficiency (EU)	All utilities	Customers; Elected officials, community leaders, investors and regulators
Supply chain	Procurement practices; Supplier environmental assessment; Supplier social assessment	All	Select external stakeholders
The future	Training and education; Employment	All	Select external stakeholders
Water	Water; Effluents and waste	All	Select external stakeholders

Content index

A

air emissions, 79
Aliso Canyon, 4, 5, 7, 8, 14, 18, 30, 31, 36, 37, 42, 55, 60, 64, 67, 85
assets, 9, 11, 55, 58, 70, 71, 77, 83

B

biodiversity, 43, 78
board of directors, 12, 13, 19, 55, 72

C

carbon emissions. *See* emissions
CDP (Carbon Disclosure Project), 7, 76, 77, 78, 79
CEO letter, 3
climate change, 22, 23, 24, 28, 29, 76, 77
  emissions reductions, 22, 23, 24, 28, 29, 76, 77
  opportunities, 5, 24, 51, 52, 53, 68, 72, 76
  risks, 22
  U.S. energy policy, 29
codes of conduct, 76
community, 25, 54, 58, 59, 75, 76, 82, 84
community giving, 59
compliance, 12, 16, 17, 18, 20, 21, 27, 34, 42, 43, 47, 64, 75, 77, 79, 83, 84
compliance and management systems, 21
customers, 3, 4, 5, 8, 10, 16, 21, 23, 24, 25, 26, 27, 30, 31, 33, 34, 35, 40, 45, 53, 54, 55, 56, 57, 58, 61, 62, 64, 65, 66, 68, 69, 75, 76, 80, 82, 83
  community engagement, 82
  customer-assistance programs, 54, 56
  philanthropy, 58
  rates, 32, 52, 56, 68, 69, 70, 80
  reliability, 3, 6, 7, 8, 9, 21, 22, 37, 56, 57, 60, 63, 68, 84
cybersecurity, 12, 18, 68, 83

D

data, 9, 18, 20, 25, 27, 31, 32, 39, 58, 62, 63, 64, 71, 72, 74, 75, 76, 77, 78, 79, 82, 83

E

electric vehicles, 5, 27, 41, 65
emissions, 3, 14, 20, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35, 37, 42, 63, 64, 65, 68, 74, 75, 78, 79, 84
  biogas, 25, 34
  carbon dioxide equivalent, 26
  climate change, 30
  CO_2e, 25, 26, 30, 32, 34, 64, 75
  emissions rate from power generation, 64
  greenhouse gas emissions, 23, 25, 26, 28, 31, 32, 33, 34, 35, 63, 64, 74, 78, 79
  methane emissions, 14, 32, 34, 36, 37, 55
  scope 1 emissions, 33
  scope 3 emissions, 30, 33
employees, 3, 5, 7, 9, 10, 17, 19, 20, 24, 36, 41, 43, 46, 48, 49, 50, 51, 52, 53, 55, 56, 58, 59, 60, 61, 62, 64, 67, 68, 71, 73, 75, 77, 80, 81
  benefits, 3, 41, 48, 51, 58, 68, 82, 83
  diversity and inclusion, 50, 51
  engagement, 13, 14, 46, 52, 63, 72, 73, 82, 84
  giving, 48, 59, 60, 64
  mentoring, 49, 52
  volunteerism, 58, 60
  wellness, 48, 49
energy storage, 5, 6, 57, 65
  electric, 4, 5, 6, 7, 8, 10, 18, 24, 25, 27, 28, 29, 31, 37, 38, 40, 41, 44, 55, 56, 57, 58, 65, 68, 69, 75, 78, 82, 83
  natural gas, 4, 5, 6, 7, 8, 10, 14, 18, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 42, 44, 45, 46, 53, 55, 56, 57, 61, 64, 65, 68, 71, 74, 77, 83
environment, 1, 21, 22, 29, 44, 45, 50, 53, 58, 72, 73, 74, 77, 80, 82
  compliance, 12, 16, 17, 18, 20, 21, 27, 34, 42, 43, 47, 64, 75, 77, 79, 83, 84
  emissions, 22
  impact, 19, 23, 24, 29, 31, 37, 39, 43, 44, 45, 50, 54, 58, 60, 62, 63, 68, 69, 76, 82, 84
  training and development, 81
  waste, 37
  water, 23
ethics, 16, 20, 72, 77

F

fugitive emissions, 32

G

generating capacity, 6, 8, 25, 28
goals, 8, 14, 31, 34, 51, 52, 68, 77
governance, 12, 14, 63, 64, 72, 73, 81, 84
greenhouse gas emissions, 23, 25, 26, 28, 31, 32, 33, 34, 35, 63, 64, 74, 78, 79
GRI Index, 71, 74

H

health and safety, 12, 21, 43, 52, 80, 82, 83, 84
human capital, 81
human rights, 54, 81, 82
hydraulic fracturing, 45
hydroelectric, 8, 25, 26, 28

I

innovation, 3, 27, 29, 50, 65, 77

L

labor unions, 52, 53, 73, 80
LNG, 4, 5, 6, 7, 9, 10, 22, 26, 29, 31, 38, 55, 62, 71, 74, 78

M

materiality, 62, 63, 76, 77, 79, 81, 83
methane, 14, 26, 27, 31, 32, 34, 37, 55

N

natural gas, 4, 5, 6, 7, 8, 10, 14, 18, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 42, 44, 45, 46, 53, 55, 56, 57, 61, 64, 65, 68, 71, 74, 77, 83
  pipelines, 6, 7, 23, 26, 33, 34, 36, 37, 44, 55, 65
  power-to-gas, 8, 34, 37
  renewable natural gas, 65
  safety, 26
  storage, 4, 5, 6, 7, 8, 10, 18, 24, 25, 26, 27, 31, 34, 36, 37, 42, 55, 57, 64, 65, 66, 68, 74
  vehicles, 5, 10, 24, 27, 29, 33, 34, 35, 41, 47, 55, 56, 65

P

performance data, 63
philanthropy, 58
pipelines, 6, 7, 23, 26, 33, 34, 36, 37, 44, 55, 65
  leak detection, 55
  safety, 7
political engagement, 72
  contributions, 16, 17, 58, 60, 82
  policies, 12, 16, 17, 20, 21, 29, 45, 54, 68, 73, 77, 82
  position statements, 16

R

recycling, 40, 79
regulations, 18, 20, 21, 23, 27, 29, 34, 42, 43, 45, 56, 68, 77, 79, 80, 82, 83
regulators, 4, 10, 24, 31, 56, 57, 61, 73, 84
reliability, 3, 6, 7, 8, 9, 21, 22, 37, 56, 57, 60, 63, 68, 84
renewable energy, 9, 10, 22, 23, 25, 26, 29, 32, 34, 37, 68, 74
risk management, 12, 19, 21, 36, 75

S

safety, 3, 7, 9, 12, 16, 18, 20, 21, 22, 26, 36, 42, 43, 47, 49, 50, 52, 53, 55, 56, 63, 66, 67, 68, 77, 80, 82, 83, 84
shareholder engagement, 14
storage, 4, 5, 6, 7, 8, 10, 18, 24, 25, 26, 27, 31, 34, 36, 37, 42, 55, 57, 64, 65, 66, 68, 74
  electricity, 4, 6, 8, 23, 26, 27, 28, 30, 31, 32, 33, 41, 44, 57, 58, 61, 65, 66, 75, 76, 77, 78, 83
  natural gas, 34
strategy, 10, 43, 68, 72, 73, 77
supply chain (suppliers), 21, 44, 60, 71, 79, 82
  diverse business enterprises, 64, 67
  impacts, 18, 21, 23, 24, 28, 29, 44, 53, 54, 60, 71, 72, 76, 78, 79, 82, 83, 84
  Supplier selection and monitoring, 21, 44, 60

T

targets, 4, 24, 32, 56, 57

U

utilities, 5, 7, 9, 10, 18, 21, 25, 27, 28, 30, 31, 32, 34, 39, 44, 54, 55, 56, 57, 60, 61, 62, 64, 67, 71, 74, 76, 79, 82, 83, 84

V

values, 10, 14, 15, 16, 20, 21, 72, 73

W

waste, 8, 37, 40, 41, 42, 64, 79, 84
water, 3, 20, 23, 25, 26, 27, 34, 38, 39, 41, 42, 64, 66, 78, 79
wind, 2, 6, 8, 23, 25, 28, 55, 57, 71

X

xeriscape, 39

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