

SUSTAINABILITY



2016 REPORT



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Electricity plays a central role in our society, supporting everything from the digital economy to the industrial heartland. It profoundly impacts billions of lives and that is what drives our vision to create a sustainable energy future. We are committed to safely providing reliable, affordable and cleaner power, while creating value for our stakeholders.

Sustainability is at the heart of NRG's mission because sustainable business is smart business. Our integrated approach goes well beyond just reducing carbon emissions. At NRG, sustainability is a philosophy that underpins and encourages value creation across all of our businesses and for all of our stakeholders. To that end, we're introducing today an inclusive five-pillar strategy that is designed to enhance every area of our business.

During 2016, we made significant progress towards achieving our vision. We decreased our CO₂e emissions by 23 percent from 2015 and converted three plants

from burning coal to natural gas. We brought online the largest carbon capture project in the world at an existing power plant, and expanded our renewables business. We introduced initiatives to better attract and retain talent by creating a more sustainable work environment. With this report, we become the first company in the U.S. power sector to report to our stakeholders using the Sustainability Accounting Standards Board (SASB) standards. Finally, we continued to strengthen and adapt our business so it can generate sustained value.

A future of abundant, reliable, cleaner and affordable energy will continue to power U.S. innovation for years to come. As the energy industry continues to evolve, we aim to remain at the forefront and I look forward to progressing on this journey together. ✦

 At NRG, sustainability is a philosophy that underpins and encourages value creation across all of our businesses and for all of our stakeholders. 



Mauricio Gutierrez
Chief Executive Officer

MAURICIO
GUTIERREZ





BRUNO SARDA

Vice President, Sustainability

The U.S. power grid – the “largest machine ever built” – was designed to produce and distribute power safely, reliably and affordably, and it has done that extremely well. Now, faced with clear scientific and business drivers to address the impacts of greenhouse gas emissions, our sector is marching toward a sustainable energy future and NRG is leading the way.

I’m proud to introduce my first sustainability report with NRG – and what a year to join the power industry. Here are a few facts to put 2016 in perspective:

- The number of Fortune 500 companies committing to 100 percent renewable electricity grew to 87, representing approximately 107 TWh of renewable power annually¹
- For the first time in history, natural gas surpassed coal as the leading source of electric power in the U.S.²

- The U.S. saw more than 14 gigawatts of new solar installations – nearly double that of 2015³, as solar became the cheapest source of new electricity in many parts of the world⁴
- Investor funds adhering to sustainable investment principles reached \$9 trillion in 2016, nearly 20% of total assets under professional management and a 33% increase since 2014⁵
- The Paris Climate Agreement went into full effect, and more than 140 countries have ratified it to date⁶

Sustainability at NRG goes beyond carbon emissions and is designed to drive business results across the organization while reducing risk and enhancing brand value. That’s why in this report we’re introducing a five-pillar strategy that comprises our customers, workplace, business, operations and suppliers. This new framework allows us to take a

holistic view of our business while creating value for all our stakeholders.

To better communicate that framework, the SASB standards will help us integrate comparable, industry-specific sustainability accounting metrics into our existing reporting, empowering our stakeholders to make better informed decisions.

We aim to operationalize our sustainability vision to help create a future where innovative and competitive forces are unleashed to decarbonize our economy, and where advancing renewable electricity generation and facilitating a low-carbon grid become explicit goals of electricity markets. ✦

Bruno Sarda
Vice President, Sustainability

Faced with clear scientific and business drivers to address the impacts of greenhouse gas emissions, our sector is marching toward a sustainable energy future and NRG is leading the way.

¹<http://re100.org/>

²<https://www.aei.org/wp-content/uploads/2017/03/graph01-2.png>

³<http://www.seia.org/blog/solar-industry-sees-largest-quarter-ever#>

⁴<http://fortune.com/2016/12/15/solar-electricity-energy-generation-cost-cheap/>

⁵http://www.ussif.org/files/SIF_Trends_16_Executive_Summary.pdf

⁶http://unfccc.int/paris_agreement/items/9444.php

Sustainability Context

NRG's vision is to create a sustainable energy future. Therefore, our daily mission is to safely power the American economy with reliable, cleaner and affordable electricity.

We're focused on creating value for our shareholders today and into the future. To do so, we stay abreast of the forces of change in the industry and adapt our business accordingly.

Political and regulatory uncertainty

The Environmental Protection Agency (EPA) has indicated its intent to reevaluate the prior administration's efforts to regulate greenhouse gas emissions. As such, the future of the government's Clean Power Plan is uncertain. Furthermore, the implementation of other emissions regulations, such as a carbon tax, is improbable in the foreseeable future.

Still, efforts to address economy-wide greenhouse gas emissions remain important to the power sector, and may lead to more state and regional regulatory actions as the effects of climate change are felt across the United States. These effects may impact our business operations and infrastructure. Changes in weather or other environmental conditions, such as temperature

and precipitation levels, can affect electricity demand. Additionally, the increased frequency and severity of storms, floods and other climatic events can disrupt our operations and cause us to incur significant costs to prepare for or respond to their effects. In 2014, the polar vortex caused an extreme, short-term spike in power demand on the East Coast, which strained the reliability of the power system and showed the value of an integrated, resilient generation fleet. In 2016, NRG plant and business operations were affected by events such as flooding in the Gulf Coast region and wildfires in the West. Changing climate conditions could also affect the availability of a secure, economical supply of water in some locations, which could affect the continued operation of some of our generation plants.

With or without regulation, sustainability makes good business sense and will be driven by business decisions. For example, corporate energy buyers demand renewable power because it's increasingly more cost-effective and their customers and stakeholders demand it. Still, the need for supportive policies and utility offerings remains, and companies often look to states to pave the way. Learn more about NRG's policy engagement efforts [here](#).

Technological advances

The disruption of the power industry is under way. It's partly driven by advances in the Internet of Things, smart-grid technologies, the electrification

of transportation, battery storage, rapid advances in renewable energy systems, more efficient generation and controllable demand. To succeed 10, 20 or 30+ years from now, we must adapt to meet the challenges of a fast-changing world. Even as the industry continues to change, we recognize that electricity is the "fuel" of a decarbonized world. To meet its carbon-reduction goals under the Paris Climate Agreement, the entire U.S. economy needs to emit fewer greenhouse gasses by 2050 than today's power industry.

Given all these factors, we spend a lot of time thinking about what technologies will be needed to maintain system reliability and affordability while meeting national carbon emission reduction targets. We're also considering how to design today's energy markets to drive the investments necessary to deploy these technologies.

To that end, we envision a diversified future that will increasingly include renewables, demand response/efficiency, energy storage and high-performance, fast-start natural gas units. Furthermore, our investment in carbon capture and conversion projects, such as **Petra Nova** and the **NRG COSIA Carbon XPRIZE**, show how we're acting on innovative ideas to create value in this dynamic landscape.

Rapid growth of renewables

Nearly 100 large corporations have committed to buying 100 percent renewable electricity as part of the RE100 initiative.⁷ Many more have made partial commitments, galvanizing renewable energy as a mainstay in corporate sustainability strategy.

Since 2014, large companies have contracted for 6 gigawatts (GW) of new utility-scale solar and wind projects.⁸ And according to the American Wind Energy Association, corporate and other non-utility customers signed about half of the power purchase agreements for wind projects in 2015.⁹

To put those numbers into context, Lawrence Berkeley National Laboratory reported that today's state renewable portfolio standards goals would require an additional 60 GW of renewable energy by 2030.¹⁰ That's the same target the Renewables Energy Buyers Alliance has for corporations by 2025.¹¹ This rapid growth means corporate renewable energy buyers can influence and benefit from energy markets in an unprecedented way. And it represents a material commercial opportunity for NRG.

Safely and reliably integrating that much renewable generation into the U.S. power grid is an unprecedented challenge. However, combining the aforementioned technological advances with effective policies will help NRG pave the way toward a sustainable energy future.

⁷<http://re100.org/>

⁸<http://businessrenewables.org/corporate-transactions/>

⁹<http://www.awea.org/Resources/Content.aspx?ItemNumber=9372>

¹⁰<https://emp.lbl.gov/sites/all/files/lbnl-1005057.pdf>

¹¹<http://rebuyers.org/>

Rise of sustainable investing and transparency

In 2016, sustainability issues further cemented their place in the financial landscape. There's now greater access to data on how environmental, social and governance-related risks are assessed, priced and managed by companies. This trend runs parallel to the rise of sustainable investing and lending, a movement that seeks to effect positive change through capital markets.

Institutional investor awareness means investors are prepared to divest if a company has a poor record of sustainability performance or a heavy environmental footprint. BlackRock, the world's largest asset manager, recently announced that climate risk would be a "principal tenet of its active investment strategy."¹² In 2016, at the request of the G20 nations, the Financial Stability Board established the Task Force on Climate-Related Disclosures and subsequently published guidance¹³ for how companies should evaluate and disclose climate risks in financial filings.

More and more, stakeholders demand that companies exhibit radical transparency and voluntarily disclose non-financial data. CDP reports that more than 5,800 organizations, including 81 percent of the world's largest public companies, disclose environmental information to investors, major purchasers and other stakeholders. In 2015, more than 80 percent of S&P 500 companies published a sustainability report.

Rise of sustainable procurement and supply chain engagement

Corporations are taking action to ensure their supply chains are transparent, resilient, and responsible both socially and environmentally. Industries are developing standards and frameworks for sourcing and distributing their products through organizations such as the Sustainable Apparel Coalition, the Electronic Industry Citizenship Coalition and the Sustainable Purchasing Leadership Council.

Multinational corporations have set science-based targets to gradually remove emissions from their supply chain. Achieving such goals requires a concerted effort by entities throughout a company's supply chain. Additionally, heightened public scrutiny of sourcing increases companies' reputational risks. That makes supplier standards and codes of conduct, which commonly include criteria for diversity, gender equality and labor rights, important tools for companies focused on sustainability.

Rise of sustainable commitments and business practices

In addition to climate commitments, businesses are setting other big audacious goals like zero waste, conflict-free minerals and regenerative water. More than 200 companies have committed to science-based emission-reduction targets, and many have set an internal price of carbon.

Effective sustainable business practices extend into the boardroom. Since corporate boards have the responsibility to ensure the long-term viability of the company, knowledge of environmental and social issues is imperative. Boards of directors have increasing oversight of corporate sustainability through one of their committees. Large institutional investors such as CalPERS and CalSTRS take it a step further, pressing for climate change risk management expertise on all the boards of the companies in which they invest.

Workforce of the future

Millennials will soon overtake baby boomers as the largest age block in the U.S. workforce. Surveys repeatedly show that corporate social responsibility is a top priority not just for the hiring and retention of millennials, but also for the workforce in general. To succeed now and in the future, employers must be able to attract and retain the best talent. ✦

¹²https://www.blackrock.com/corporate/en-us/newsroom/press-releases/article/corporate-one/press-releases/blk-active-equity_US

¹³<https://www.fsb-tcfd.org/publications/>



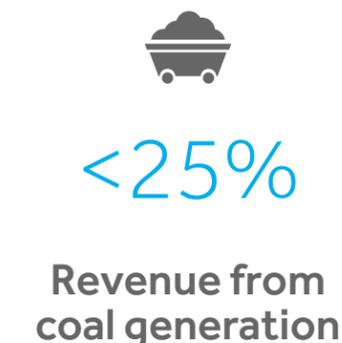
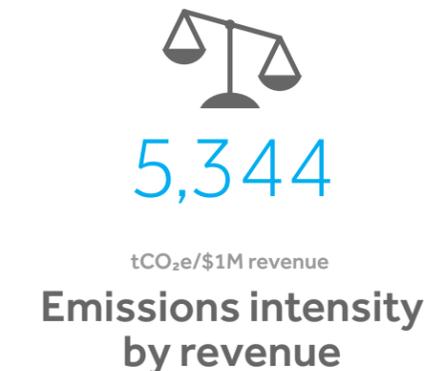
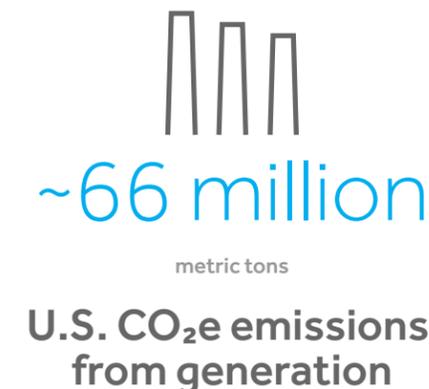
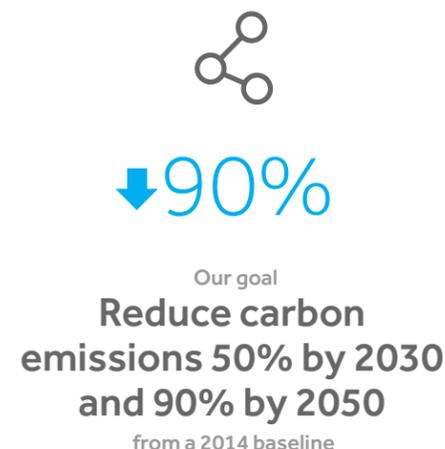
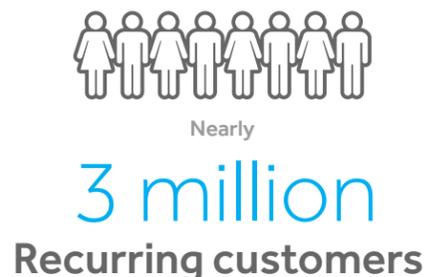
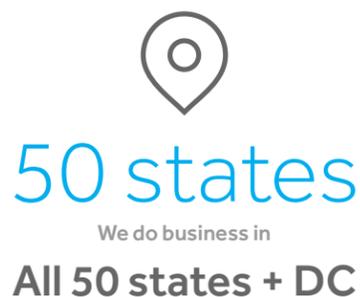
NRG at a glance

NRG Energy, Inc. is a leading integrated power company built on the strength of the nation's largest and most diverse competitive electric generation portfolio and leading retail electricity platform. Our vision and mission is to create a sustainable energy future by safely providing reliable, cleaner power that enhances people's lives and delivers value to our stakeholders.

NRG's core businesses include wholesale generation, retail electricity (including personal power solutions and business solutions), contracted generation owned by NRG Yield, Inc., and renewable utility-scale and distributed generation assets owned in part by NRG Yield, Inc.

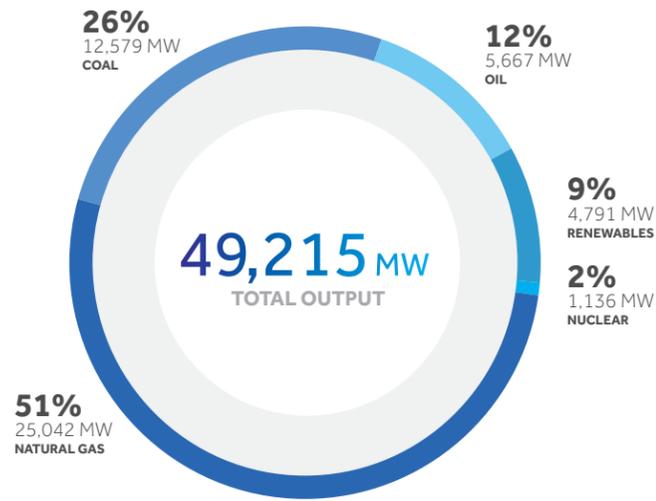
2016 was a year of change for NRG. We announced a new mission. We simplified our business model to focus on our core strengths: generation and retail. We also began increasing financial flexibility, focusing on strengthening the balance sheet and operating a lower-cost platform. We did all this while continuing to deliver strong financial and operational results.

The catalyst for many of these changes is the continued disruption in the electric power industry. From the abundance of low-cost natural gas to the increasing role of renewables, our industry is evolving. The business model that will create long-term value in this turbulent atmosphere leverages current strengths of an integrated platform and creates efficiencies. With this in mind, we began efforts in late 2015 to enhance our entire platform. ✚



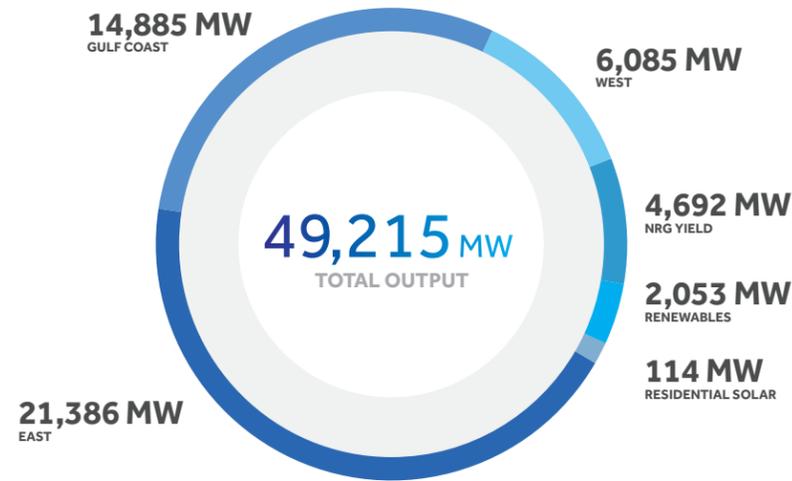
All figures as of Dec. 31, 2016

NORTH AMERICA PORTFOLIO
Total generation capacity by fuel type



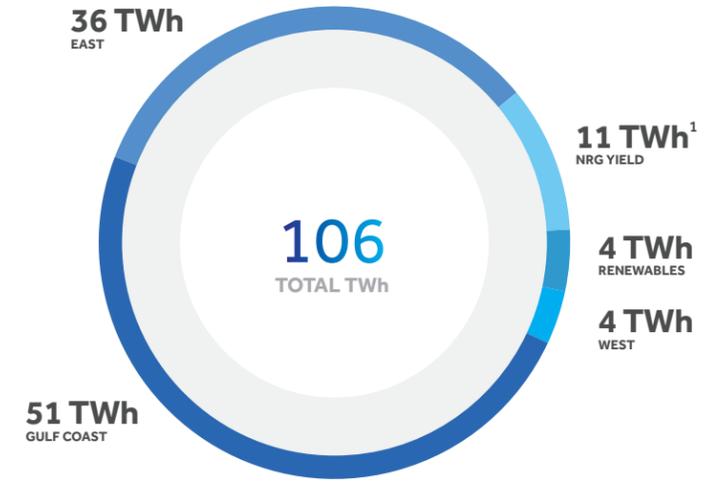
Before non-controlling interest

NORTH AMERICA PORTFOLIO
Total generation capacity by region



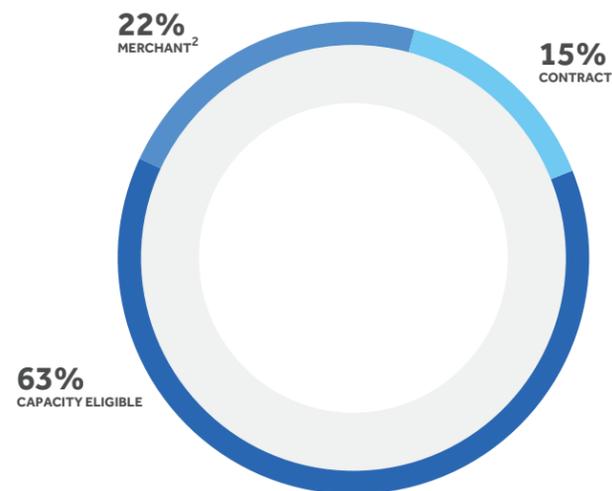
Before non-controlling interest

NORTH AMERICA PORTFOLIO
2016 TWh generated



¹ Includes 2 TWh for NRG Yield's thermal stream and chilled water facilities

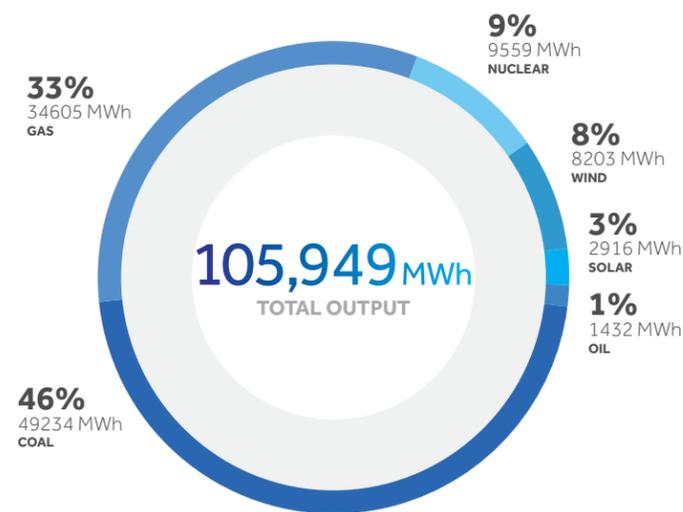
CONTRACT vs MERCHANT
Percentage of generation capacity



² Consists entirely of assets in the ERCOT market

All charts as of Dec. 31, 2016

THOUSANDS OF MWh
Net generation performance by fuel type



STRATEGY & PERFORMANCE

Sustainability at NRG is a business opportunity to meet evolving market demands in a rapidly changing industry. Our sustainability efforts focus on driving business results, reducing risk and enhancing our brand value. To help create a sustainable energy future, we prioritize our work into five key pillars:

- Sustainable Business
- Sustainable Operations
- Sustainable Customers
- Sustainable Suppliers
- Sustainable Workplace

Our sustainability efforts closely align with our business units and goals and are organized with cross-functional engagement and strong governance. Each pillar comprises business activities that create value for NRG and its stakeholders by driving the business, mitigating risk and ensuring organizational continuity.

SUSTAINABLE BUSINESS



SUSTAINABLE OPERATIONS



SUSTAINABLE CUSTOMERS



SUSTAINABLE SUPPLIERS



SUSTAINABLE WORKPLACE



Goals

Ensuring success and clearly communicating our ambition requires setting goals and tracking and reporting progress. To keep our message clear, we will not set public goals for every key performance indicator we track. NRG's corporate sustainability program is broad, comprehensive and continually evaluated based on key issue assessments and emerging risks and opportunities.

We're committed to positively affecting our employees and communities and reducing the environmental footprint of our fleet while ensuring long-term competitiveness. That includes increasing our mix of newer, cleaner energy sources, retrofitting existing plants with environmental controls, executing coal-to-gas conversions and implementing carbon capture technologies. Most importantly, we maintain an unwavering commitment to safety and reliability. ✦



Sustainable Business

As with other organizations that have chosen to make sustainability part of their strategic imperative, sustainability at NRG means driving business results, reducing risk and enhancing the company's brand value. Sustainable Business lies at the core of our five-pillar strategy because it encompasses initiatives that embed sustainability throughout the organization. This includes our objectives to be recognized as a thought leader on transparency and other key issues, to measure key sustainable business goals and to manage stakeholder engagement. This strategy ties financial performance with our decarbonization efforts. It also advances dialogue around future corporate reporting while engaging with our broad stakeholder network.

Governance

To further integrate sustainability into our business, we've set up a robust system of governance and information gathering to help us determine where to make changes, how to manage priorities and how to engage our investors and stakeholders. Learn more about NRG's corporate governance [here](#).

Board of directors oversight

In 2016, our board's Governance and Nominating Committee officially added corporate sustainability to its oversight. The Committee reviews NRG's strategies and efforts to manage its environmental, economic and social impacts, including, but not limited to, NRG's environmental, climate change and sustainability policies and programs. Learn more about committee composition [here](#).

Corporate sustainability governance structure

Sustainability is also championed by our business leaders, integrated into our core operations and, therefore, embedded into our organizational strategy.

Further, the sustainability team is advised by a CEO-led executive steering committee to guide the development, integration and implementation of our strategy. The committee meets biannually and communicates throughout the year for specific implementation needs. In 2016, the committee's structure adjusted to position leadership in strategic priority areas and will continue to evolve in 2017.

As of Dec. 31, 2016, the executive steering committee included the following members:

- **Mauricio Gutierrez**, President and CEO
- **Kevin Cole**, Senior Vice President, Investor Relations
- **Craig Cornelius**, Senior Vice President, Renewables
- **Lynda Clemmons**, Vice President, NRG Business Solutions
- **David Hill**, Executive Vice President and General Counsel
- **Elizabeth Killinger**, Executive Vice President and President, NRG Retail
- **Judith Lagano**, Senior Vice President, Asset Management
- **Christopher Moser**, Senior Vice President, Operations
- **Bruno Sarda**, Vice President, Sustainability
- **Walter Stone**, Senior Vice President, Environmental and Assistant General Counsel ✚

Stakeholder engagement

As we realize our vision to create a sustainable energy future, we focus on disciplined strategies and smart capital allocation while adhering to the needs and concerns of our stakeholders. Critical stakeholders include our shareholders, customers, peers, policymakers, suppliers, employees, civil society and the communities we serve.

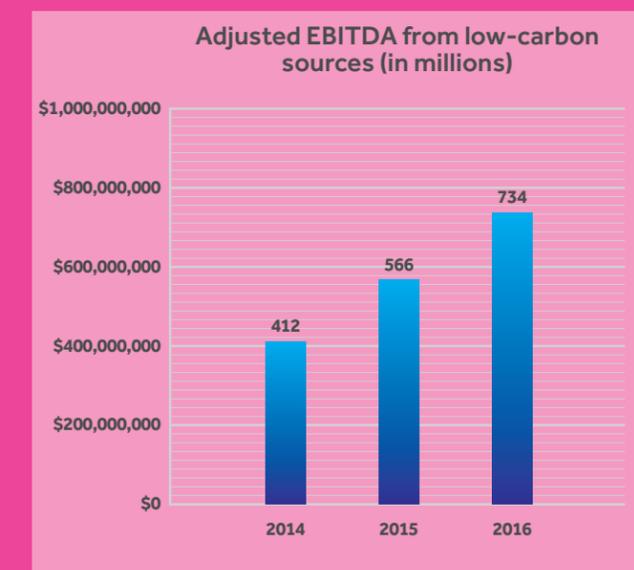
To strengthen our relationship with key stakeholders, we actively seek opportunities to engage with them and foster a collaborative dialogue. In support of this effort, NRG in 2016 became a member of Ceres, a highly respected nonprofit organization whose mission is to "mobilize investor and business leadership to build a thriving, sustainable, global economy." With Ceres, we've established a formal Stakeholder Advisory body, which meets several times a year and includes investors, customers, leading NGOs, policy groups, and

Goals and performance

Our Sustainable Business goals are:

- Continue growing Adjusted EBITDA¹⁴ from low-carbon sources¹⁵
- Continue reducing revenue carbon intensity (Mt CO₂e/\$1M revenue)¹⁶
- Lead our sector in sustainability transparency and disclosure¹⁷

In 2016, we continued the upward trend of increased Adjusted EBITDA from low-carbon sources. Our diversified generation portfolio allows us to capitalize on growth opportunities and quickly replenish capital through the NRG Yield partnership.



We also continued to decrease the carbon intensity of our revenue. The reduction year over year is due in part to an overall decrease in fossil-fuel generation, plant conversions from coal to natural gas and an increase in renewable generation.

¹⁴ Adjusted EBITDA is a non-GAAP financial measure. This measurement is not recognized in accordance with GAAP and should not be viewed as an alternative to GAAP measures of performance. The presentation of Adjusted EBITDA should not be construed as an inference that NRG's future results will be unaffected by unusual or non-recurring items. See Appendix A for the reconciliation of Adjusted EBITDA from low-carbon sources to the most directly comparable GAAP measures.

¹⁵ This includes Adjusted EBITDA from fossil-fuel-free power generation. It does not include nuclear or technologies that specifically avoid emissions or increase efficiency.

¹⁶ Revenues used are as reported in our annual Form 10-K filings.

¹⁷ Sector is defined as electric utility or independent power producer industry. Progress will be measured according to stakeholder feedback, particularly through investor relations and participation in reporting and disclosure organizations such as GRI, Ceres and SASB.

energy experts. The group engages with us to provide useful feedback on how we can ensure alignment with expectations both commercial and otherwise.

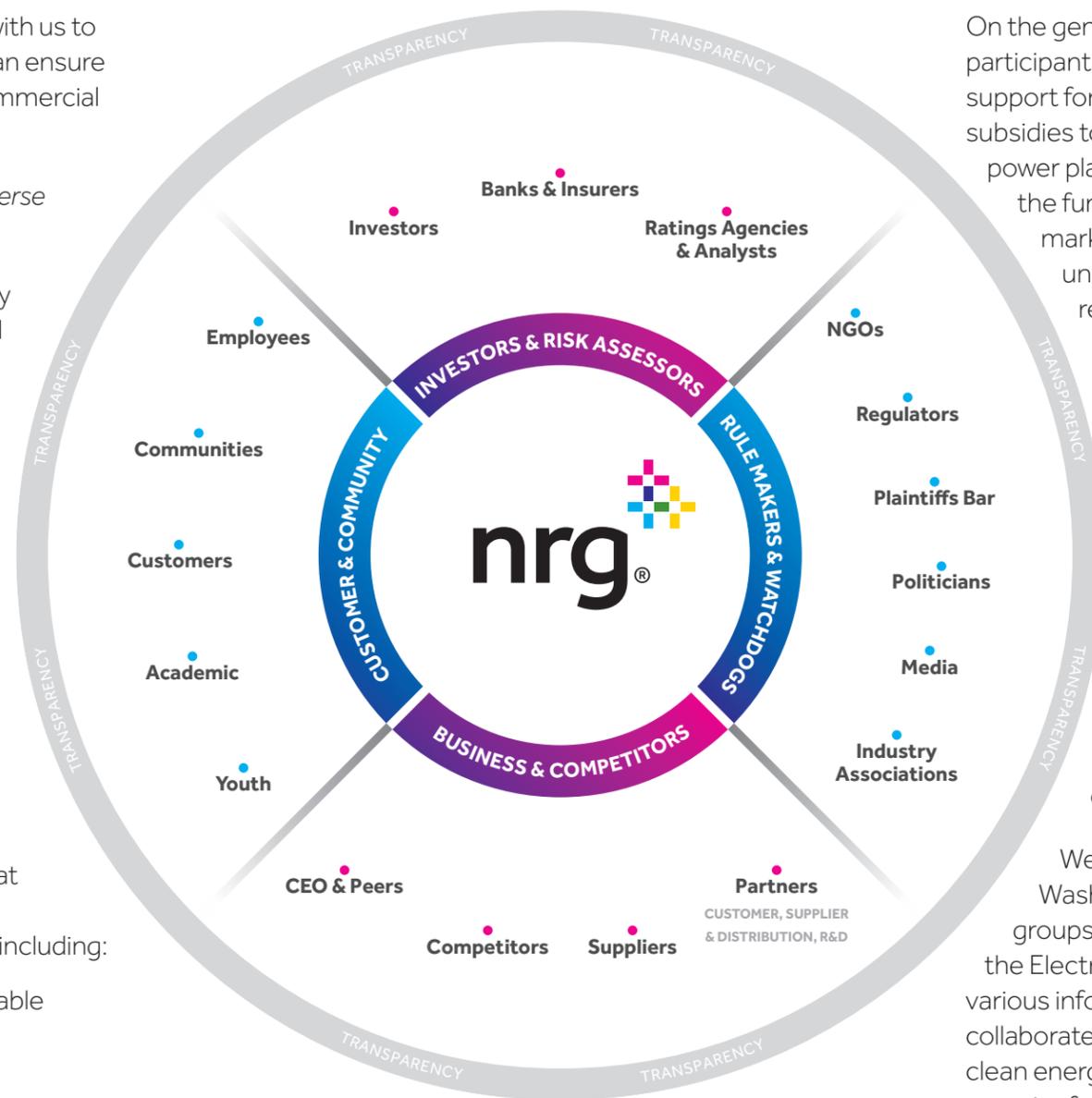
The chart on the right illustrates our diverse system of stakeholders.

Since it's our goal to remain an industry leader on disclosure, we've conducted a thorough landscape review and sought feedback to ensure our disclosure efforts meet their needs and ours. This feedback informs our sustainability strategy priorities. This has been an important factor in our decision to move toward a restructured, more streamlined and focused report.

Member organizations

NRG proactively engages with other leading companies and organizations to share best practices, engage stakeholders and create action. To that end, we hold memberships in several sustainability-focused organizations, including:

- World Business Council for Sustainable Development
- Ceres
- GreenBiz Executive Network
- Corporate Eco Forum
- GRI GOLD Community
- Rocky Mountain Institute Business Renewables Center
- Electric Power Research Institute's Energy Sustainability Interest Group
- Sustainable Leadership Forum



Policy engagement

As a leading integrated competitive power company, NRG believes competitive markets drive innovation, promote greater consumer choice, encourage efficient investment in infrastructure and ensure reliable, reasonably priced electricity supplies. Successful competitive markets require policymakers to put in place market rules that encourage private capital investment and reward innovative technologies.

On the generation side, several market participants and states have recently shown support for out-of-market contracts and subsidies to keep otherwise uneconomic power plants online. That runs counter to the fundamental principles of competitive markets that are intended to keep efficient units online and force inefficient units to retire. These actions may bring short-term gains, but they harm the market and the entire value chain of energy generation and consumption while also suppressing innovation.

Competition is just as important on the retail side, and we'll continue to push for market mechanisms that encourage innovative new offerings and consumer choice. For both parts of our business, generation and retail, we will continue to be a vocal advocate of competitive markets.

We engage directly with policymakers in Washington, D.C., and indirectly through groups such as the National Climate Coalition, the Electric Power Supply Association and various informal organizations. When possible, we collaborate with major environmental groups on clean energy and climate solutions. We support meaningful congressional and regulatory actions to mitigate greenhouse gas (GHG) emissions, as well as policies that foment the development and deployment of competitive low-carbon power generation technologies. Previously, we supported climate change legislation and incentives for clean energy solutions. We also engage with local and national environmental groups to collaborate on environmental programs such as offering members exclusive renewable energy products. Learn more about our policy engagement efforts [here](#).

Goals and performance (continued)



We achieved a handful of firsts that showcase our industry leadership in sustainability disclosure and transparency:

- 1st U.S.-based power producer to participate in CDP's Supply Chain Engagement Program
- 1st U.S.-based power producer to join the Global Reporting Initiative (GRI) Gold Community and Standards Pioneers Program
- 1st U.S.-based power producer to publish a Sustainability Accounting Standards Board (SASB) standards table along with the sustainability report
- 1st U.S.-based power producer to have certified science-based carbon emission reduction targets

Reporting

The voluntary reporting landscape is evolving rapidly. We aim to play an active role in enhanced disclosure of key issues and work to achieve transparency as we create opportunities for progress. Investors, customers and other stakeholders tell us that sustainability reporting is table stakes for productive partnerships. Incorporating environmental, social and governance issues in our reporting tells a clear management story and helps inform long-term decision-making.

About this report

This sustainability report is based on NRG corporate performance for all operations in calendar year 2016 and, where stated, "NRG" refers to NRG Energy, Inc., as well as its affiliates that include assets owned by NRG Energy, Inc. and NRG Yield, Inc.¹⁸ This, our seventh annual sustainability report, was developed with guidance of the GRI Standards at the Core level, as well as the GRI Electric Utilities Sector Supplement, which together provide a framework and guidance for best-in-class sustainability reporting. This year's report is a transitional report from GRI G4 to the GRI Standards. NRG is a member of the GRI Gold Community and part of the Standards Pioneers Program, which supports our commitment to embed sustainability into our strategic decision-making and demonstrates reporting leadership in our sector. The report includes aspects of the GRI index for our sector that are deemed as priority issues to the company. The scope of this report is primarily contained within the calendar year 2016, but some long-term projects and goals are discussed. NRG publishes a corporate sustainability report annually in both static and interactive PDF format. The NRG website provides visitors the latest news and events around the company's social, economic and environmental initiatives. See the **OneReport GRI Standards table** for a full list.

SASB Standards table

2016 is the first year NRG is disclosing sustainability data using the provisional SASB standards. Although

these standards are designed for disclosure in financial filings with the Securities and Exchange Commission, we've included a table (see **Appendix B**) as part of our sustainability reporting. After reviewing the guidance at the beginning of each of the standards and the indicators for each of the sectors, we identified the Infrastructure Sector – Electric Utilities as most applicable given the nature of our business.

Our process

Voluntary reporting at NRG is a dynamic and comprehensive effort involving dozens of internal subject-matter experts who are called upon to provide verified information for each of the topics within the reporting standards. The Sustainability Department is responsible for managing the process and has been through a certified GRI G4 to GRI Standards transition course. The entire report is reviewed by an executive communications board and then by our corporate sustainability steering committee (see **Governance**) before final vetting by general counsel. Select key metrics are third-party verified through a formal attestation (see our **third-party assurance statement**).

Third-party verification

NRG has chosen to voluntarily report on our corporate responsibility performance and has designed processes to collect and/or estimate, assess and report on this data. NRG management is responsible for the completeness, accuracy and validity of the information contained in this report. We've engaged a nationally recognized and registered public accounting firm to provide a limited assurance of our emissions inventory and water. Details of the statement of assurance can be found **here**.

Key issues

NRG follows the GRI Framework to report on issues of importance to the company and its stakeholders. As part of a re-evaluation of our sustainability strategy, in 2013, we engaged a third party to facilitate a formal

assessment to determine these key issues. Our initial assessment identified 49 issues as important to stakeholders and the NRG business. Selecting which of these issues to report on then involved a series of internal workshops and fed into the process for feedback received from regular engagement with our external stakeholders (see **key issues matrix**). We revisit this assessment annually to determine the content for the Sustainability Report. Key issues for NRG as delineated by the GRI Standards for 2016 include:

- Biodiversity
- Compliance
- Effluents and waste
- Emissions
- Employment
- Energy
- Occupational health and safety
- Procurement practices (supply chain)
- Water

We believe these aspects accurately represent the organization's significant economic, environmental and social issues at this time. They also align with the key themes of the NRG corporate strategy and are the focus of our efforts to create robust targets and goals. These topics aim to cover all NRG brands and businesses. We do recognize, however, that some of these topics are more relevant to certain parts of the organization than others. For example, most of the environmental disclosure is focused on our power-generating fleet since that is where we have the ability to make the most impact through carbon-emission reduction and more efficient water use. Relevant financial implications, as well as a discussion of risks and opportunities associated with some of these issues, can be found in Part 1, Item 1A in our 2016 Form 10-K. Additional financial statements or equivalent documents can be found **here**.

Key issues assessment

To formally establish the process of defining key issues for sustainability, in 2013, NRG engaged a third party to conduct a preliminary formal assessment of key issues with internal stakeholders who represented diverse parts of our organization. Their input was solicited through surveys and an in-person workshop. In parallel, we prioritized our key issues according to a high-level, qualitative rating using existing NRG data and industry and external stakeholder resources.

In 2016, we revisited our key issues matrix to ensure that the findings remained relevant to NRG's current business and operating environment. During this process, we interviewed more than 100 internal and

external stakeholders, and their results

were synthesized into an executive briefing document to share with NRG leadership. For the purpose of the Sustainability Report, these findings were also compared with external best practice publications on metrics, such as the Electricity Producers Research Institute Metrics for the Electricity Producers Industry, the Financial Stability Board's Task Force on Climate Related Financial Disclosures, and the SASB Electric Utilities Standards. The end result confirmed that the key issues NRG was reporting against were indeed the most pressing issues for the company at the time, and they remain relevant today.

The resulting matrix (see chart) illustrates what social, environmental and economic issues may have

the greatest impact with regard to our business and stakeholders.

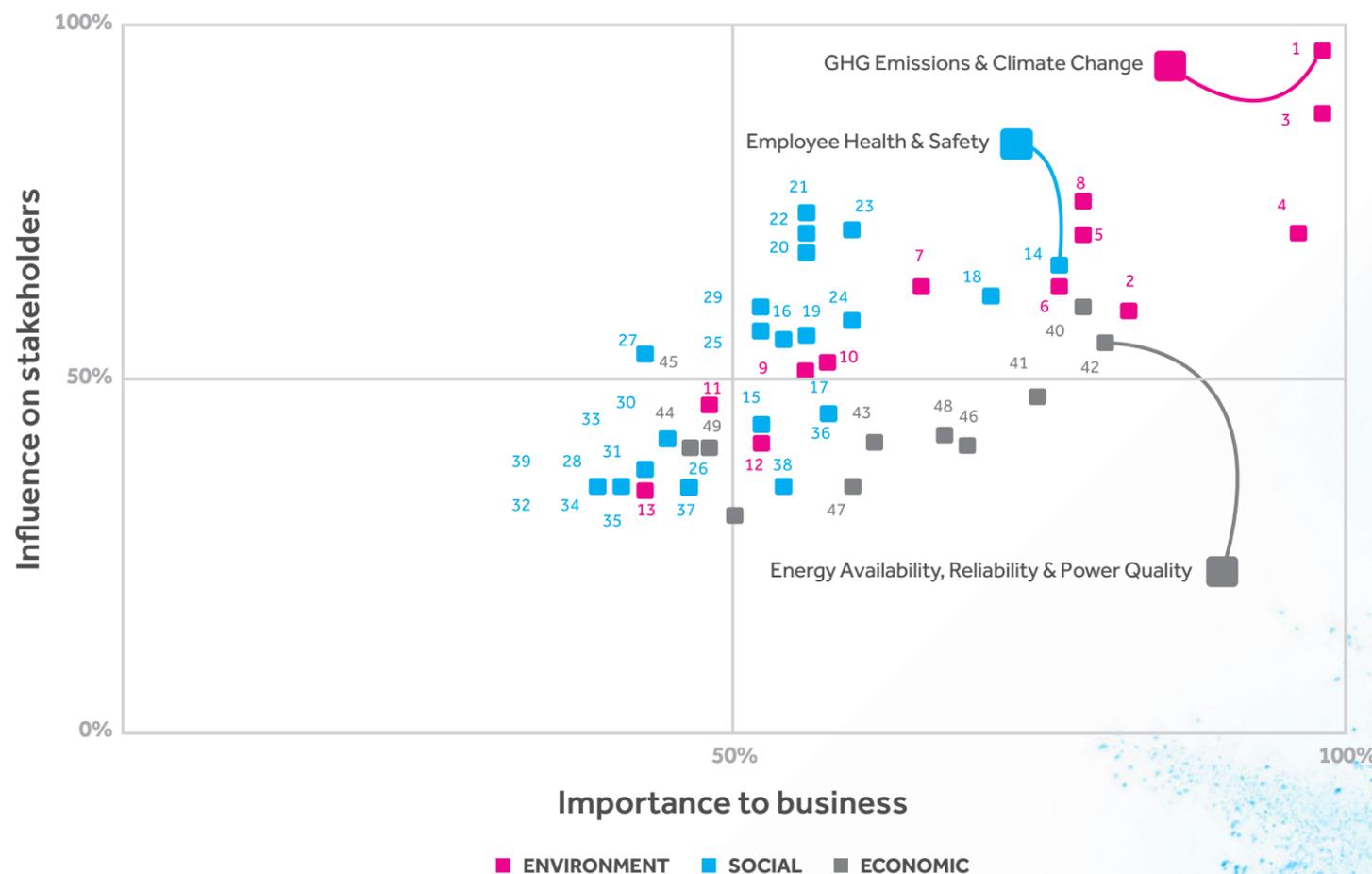
Today, we use this independent analysis to better inform business decisions and shape our voluntary reporting process. We'll continue to develop and refine this assessment on an annual basis, engaging a broader audience of internal and external stakeholders.

Key findings from the initial analysis include the following:

- **Economic findings:** Energy reliability, availability and power quality top our economic issues. The economic category includes issues that relate to the organization's impacts on the economic conditions of its internal and external stakeholders and on economic systems at local, national and global levels.

- **Environmental findings:** The environmental category includes issues that address the organization's impact on living and non-living natural systems, including land, air, water and ecosystems. As a large power producer in the U.S., we need to be conscious of emissions.
- **Social findings:** With thousands of employees working at various types of facilities, employee health and safety are the most material non-environmental issues. The social category encompasses issues concerning the impacts the organization has on the social systems within which it operates. ✚

Key Issues Matrix



U.N. Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a universal set of goals, targets and indicators that United Nations member states – and, increasingly, businesses – are expected to use to frame agendas and policies surrounding development.

Our core business most closely aligns with:

- **Goal 7:** Ensure access to affordable, reliable, sustainable and modern energy
- **Goal 13:** Take urgent action to combat climate change and its impacts

Our activities also support other SDGs. Find examples within this report using the table below.



Ensure healthy lives and promote well-being for all ages

Sustainable Operations

- Safety

Sustainable Workplace

- Wellness
- positiveNRG



Achieve gender equality and empower all women and girls

Sustainable Workplace

- Diversity
- U.N. Women's Empowerment Principles



Ensure access to water and sanitation for all

Sustainable Operations

- Water
- Biodiversity



Ensure access to affordable, reliable, sustainable and modern energy for all

Sustainable Operations

- Renewables

Sustainable Customers

- Business Solutions
- Retail



Make cities inclusive, safe, resilient and sustainable

Sustainable Business

- Stakeholder engagement

Sustainable Operations

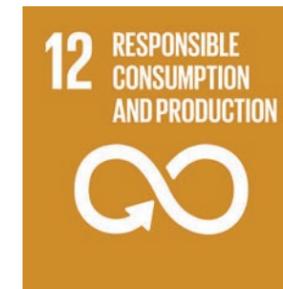
- Renewables

Sustainable Customers

- Business Solutions
- Retail

Sustainable Workplace

- positiveNRG



Ensure sustainable consumption and production patterns

Sustainable Operations

- Coal Combustion residuals
- econrg
- Effluents and waste

Sustainable Workplace

- Waste management



Take urgent action to combat climate change and its impacts

Sustainability Context

- Goals
- Policy engagement
- Reporting

Sustainable Operations

- Carbon emission goals



Sustainable Operations

We always look for ways to systematically improve environmental and community outcomes from our facilities' operations while ensuring efficiency, reliability and stakeholder value. Focus areas within Sustainable Operations include safety, GHG emissions and carbon utilization, water, industrial waste and biodiversity.

Our GHG-reduction goals show stakeholders the direction our business is going. Safely providing cleaner power means both increasing our renewable generation capacity and supporting those intermittent energy resources with fast-ramping natural gas plants and by incorporating battery storage and controllable demand.

As we provide cleaner power, we reduce the effects of our operations on our employees, communities and on climate change. Additionally, we create opportunities to reduce our reliance on water to cool our plants and optimize the handling of the waste those plants produce. This helps us realize cost

savings while improving the ecosystems and communities where we operate.

NRG aims to be an environmental leader in our industry, and a large part of that is executing on the goals set forth by our environmental compliance team. Such targets include minimizing the impact of conventional generation by investing in environmental controls, repowering our fleet with cleaner technologies and operating our existing plants at or above emissions standards set by environmental regulations.

Conventional generation

One of NRG's core businesses is wholesale generation. With approximately 42,000 MW of fossil fuel and nuclear generation capacity at 85 plants as of Dec. 31, 2016, we have one of the largest and most diversified power generation portfolios in the U.S.

Realizing the potential of energy requires repowering and refueling our fleet, reducing emissions and providing reliable power for millions today as we explore alternative energy solutions. As of Dec. 31, 2016, less than 25 percent of our consolidated

operating revenues were derived from coal-fired operating assets.

In addition to conventional power generation, our wholesale business also includes conventional distributed generation, which consists of combined heat and power, and large-scale distributed generation.

Renewables

By tapping into the sun and harnessing the wind, we provide customers unique and proven sustainable options to power their business operations and personal lives. NRG's renewables business acquires, develops, and operates and maintains utility-scale wind and solar, community solar and distributed solar generation assets. The business also manages and operates NRG Yield's renewable assets.

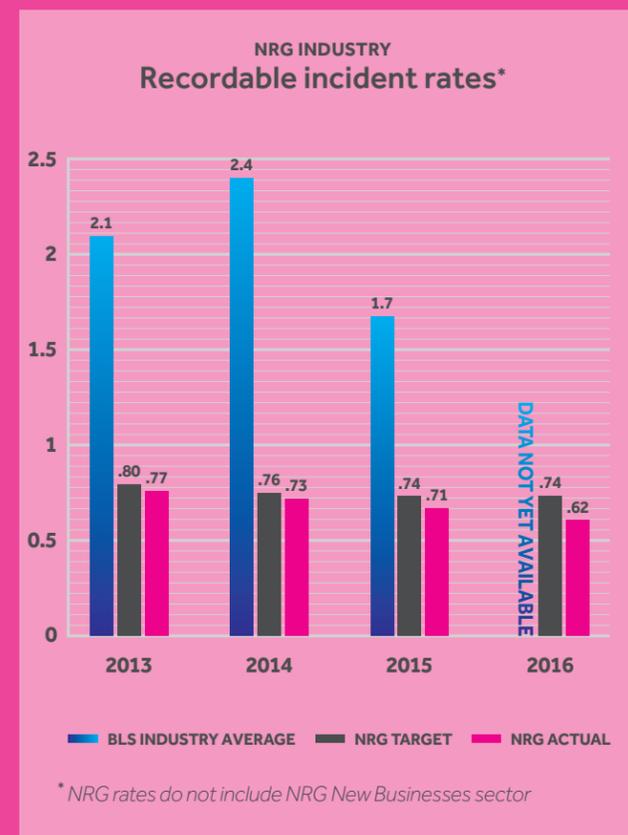
Our renewables business manages a portfolio of assets that span 26 states. The business is also one of the largest solar and wind power developers and owner-operators in the U.S., having developed, constructed and financed a full range of solutions for utilities, schools, municipalities and commercial market segments.

In 2016, we acquired 1,637 MW of utility-scale solar and wind projects and 107 MW of distributed generation and community solar projects currently under development or in operation in 12 states. Apart from assets in operation, at year's end we held a backlog of in-construction, contracted and awarded projects of 543 MW and a pipeline²³ of 3,268 MW across the utility-scale and distributed solar markets. +

Goals and performance

Our Sustainable Operations goals are:

- Achieve top-decile safety performance¹⁹
- Reduce GHG emissions 50 percent by 2030 and 90 percent by 2050²⁰
- Reduce water use 40 percent by 2030²¹
- Increase recycling rate of coal combustion residuals 30 percent by 2022²²



¹⁹ Metrics used are Occupational Safety and Health Administration (OSHA) recordable injuries, and top decile is determined by our industry average.

²⁰ From a 2014 baseline. This includes scope 1 and 2 and some scope 3 emissions.

²¹ From a 2014 baseline. Water use is defined as water withdrawal by our power-generation assets for the purpose of electricity production and consumption of potable and municipal water at our offices and small plants.

²² Baseline will be established in 2017. Coal combustion residuals include a number of byproducts produced from burning coal for electricity, including fly ash and bottom ash.

²³ Projects that range from identified lead to shortlisted with an offtake, and represents a lower level of execution certainty.

Safety

"Safety first" is more than a catchphrase at NRG. It's our No. 1 core value. Our goal is to achieve top-decile performance for Occupational Safety and Health Administration (OSHA) recordable injuries (higher decile performance means a better safety record) with the ultimate goal of a zero-injury record every year. The continuous improvement and implementation of our preventive safety practices and programs keep our employees safe and productive. In 2016, we honored our safety commitment to stay well below the industry average incident rate by registering our second-best year-end incident rate (0.62).

Star performance

We showcased our commitment with 10 NRG fleet facilities maintaining their OSHA Voluntary Protection Program (VPP) Star status – the highest possible level of recognition – in 2016:

- Big Cajun II
- Cedar Bayou
- Central Repair Shop
- Cabrillo I (Encina)
- Greens Bayou
- Ormond Beach
- San Jacinto
- Seward
- TH Wharton
- WA Parish

The VPP Star program recognizes the exceptional occupational health and safety achievements of employers and employees through an application review and in-depth, on-site evaluation by a team of OSHA experts.

Keeping contractors safe

Our comprehensive safety program includes everyone who works within an NRG facility: employees, contractors, vendors and visitors. We prequalify contractors and assign them on-site coordinators to monitor their safety performance. Additionally, we conduct field audits to ensure our contractors meet all safety expectations. Just like employees, we require contractors to report all observed hazards and incidents. We believe the value of reporting and investigating all incidents outweighs simply tracking lost-time injury rates. ✚



GHG emissions

NRG closely monitors its environmental impacts. We emit CO₂ when generating electricity at most of our facilities. The graphs presented below illustrate our U.S. scope 1 emissions of CO₂e for 2014, 2015 and 2016. We anticipate reductions in our future emissions profile as we modernize our fleet through repowering, improve generation efficiencies and explore methods to capture CO₂.

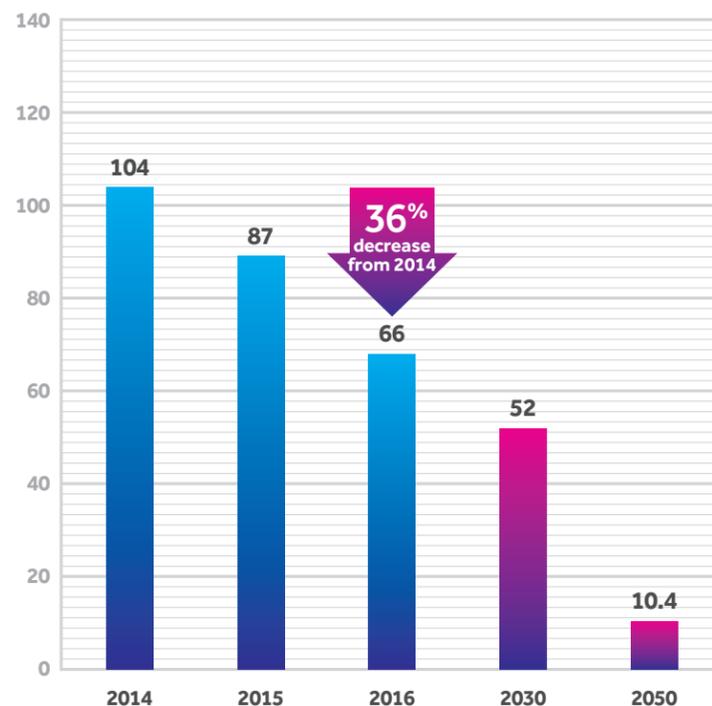
From 2015 to 2016, our CO₂e scope 1 emissions from generation decreased from 86 million metric tons to approximately 66 million metric tons, a 23-percent reduction. Factors leading to the decreased emissions include reductions in fleet-wide annual net generation due to an overall decrease in market demand and a market-driven shift towards increased generation from natural gas over coal. Additionally, as we have diversified our business beyond fossil fuel-based generation, the carbon intensity of our revenue, a key measure for our investor community, again decreased significantly in 2016.

Carbon emission goals

We plan to do our part to reduce our carbon emissions while growing our business and facilitating global progress toward a sustainable energy future. In November 2014, we set industry-leading greenhouse gas reduction goals and announced a goal to cut CO₂ and CO₂ equivalent emissions 50 percent by 2030 and 90 percent by 2050 from a 2014 baseline. This goal includes scope 1, 2, and 3 emissions. For more detail, see our **third-party assurance statement**.

In 2015, **NRG became one of the first 10** companies to have their carbon emission reduction targets approved by the Science Based Targets initiative, a joint effort of CDP, the World Resources Institute, the World Wildlife Fund and the U.N. Global Compact. The initiative works with companies and approves only corporate targets that meet its strict criteria. In March 2017, we were recognized for Excellence in Greenhouse Gas

Tracking toward our carbon emission goals (NRG U.S. CO₂e emissions scope 1, 2, & 3*)



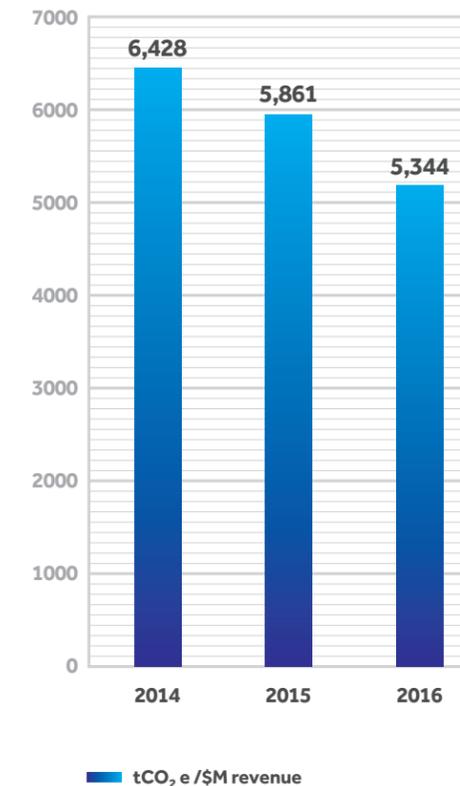
This chart represents our progress toward achieving our carbon emission reduction goals. Included in these values are scope 1, 2 and 3.

*Other CO₂e charts include only scope 1 emissions from generation.

U.S. CO₂e emissions and generation



U.S. tCO₂e/\$M revenue



Management (Goal Setting) by the EPA's Climate Leadership Awards. (NRG was notified of the award in 2016.)

Carbon asset risks

We believe future energy production can be both lower carbon and lower cost, and we're committed to making this vision a reality. As the nation's largest independent power producer, we have a unique opportunity to lead by example.

Over the last three years, our exposure to carbon risk has been greatly reduced. Between 2014 and 2016, in fact, our CO₂ emissions dropped 36 percent.

That puts us well on track to achieve our goal of a 50-percent reduction by 2030. Our emissions will continue to decrease as we transition to more renewable and natural gas generation.

Reducing carbon emissions

In 2016, we announced an important milestone in our fleet-optimization strategy by completing coal-to-gas projects totaling 2.2 gigawatts at three power plants:

- Our Joliet Generating Station near Chicago generates enough power for more than one million average households after all three of its units were converted for a total of 1,326 MW

- With 590 MW of natural gas generation, Pennsylvania's Shawville Generating Station can power more than 475,000 average households
- Our New Castle Generating Station near Pittsburgh generates enough power for more than 250,000 average households at 325 MW



The Petra Nova carbon capture project in Thompsons, Texas.

These modifications and the flexibility they allow reduce the plants' combined carbon footprint by more than 80 percent, a key step toward our goal of generating cleaner power. The reductions also were made in an economically efficient way while making the plants more competitive.

Coal-to-gas projects play an important role in moving our industry to reduce carbon emissions.

The role of regulation

The effects of federal, regional or state regulation of GHG on our financial performance depends on a number of factors, including:

- Legal challenge outcomes
- Regulatory design
- GHG-reduction levels
- Availability of offsets
- Extent to which we would be entitled to receive CO₂ emissions credits without having to purchase them at auction or in the open market

Thereafter, under any such legislation or regulation, the impact on NRG would depend on our level of success in developing and deploying low- and no-carbon technologies.

NRG operates power generation units in states that are subject to the Regional Greenhouse Gas Initiative (RGGI), which is a regional cap-and-trade system. RGGI is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. The same holds true for California's cap-and-trade program. Changes to these rules could affect our operational results, financial standing and cash flow. Learn more in **Policy engagement**.

For example, in November 2015, the EPA revised the Effluent Limitations Guidelines for Steam Electric Generating Facilities, which would impose more stringent requirements (as individual permits are renewed) for

wastewater streams from flue gas desulfurization, fly ash, bottom ash and flue gas mercury control. Due to further, more recent EPA action, we anticipate that this reconsideration will result in a revised rule that will result in a decrease in previously disclosed, anticipated, environmental capital expenditures as well as a delay in such spending.

As mentioned in **Sustainability Context**, decarbonizing the energy industry requires rapid, massive change, and the role of competitive markets is essential. Policy incentives help make renewables a viable option, but supportive market structures are necessary to ensure success beyond incentives. Direct retail access to renewable energy improves market transparency, drives innovation and investment in renewable infrastructure, and supports the expansion of renewable energy to the general public. Business consumers can help by advocating for policies that support competitive renewable markets.

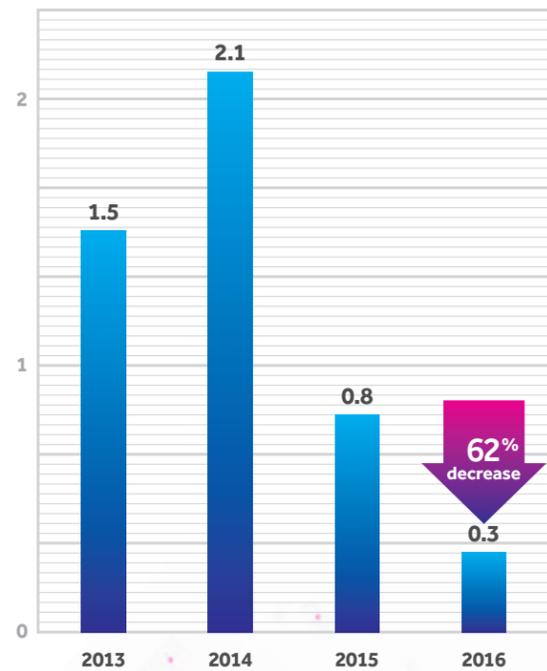
Petra Nova

In partnership with JX Nippon Oil & Gas Exploration and Hilcorp Energy Co., we completed the Petra Nova project (seen left), the world's largest post-combustion carbon capture facility, located at our WA Parish Generating Station southwest of Houston. The project, which began operations in 2016 on schedule and on budget, combines carbon capture with enhanced oil recovery (EOR) to increase domestic oil supply while decreasing the amount of CO₂ released into the atmosphere.

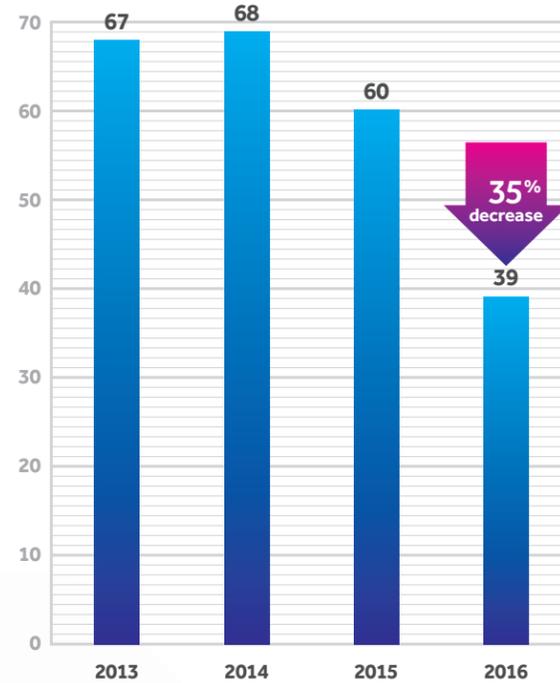
The Petra Nova project captures more than 90 percent of the CO₂ from a 240-megawatt equivalent slipstream of flue gas. At that rate, the project can capture more than 5,000 tons of CO₂ per day – the equivalent of taking more than 350,000 cars off the road.

An 80-mile pipeline safely transports the captured CO₂ through Fort Bend, Wharton and Jackson counties to the West Ranch oil field. Through EOR, oil production at West Ranch is expected to jump from around 300 barrels a day to a peak of 15,000 barrels a day while also sequestering 1.6 million tons of CO₂ annually. ✚

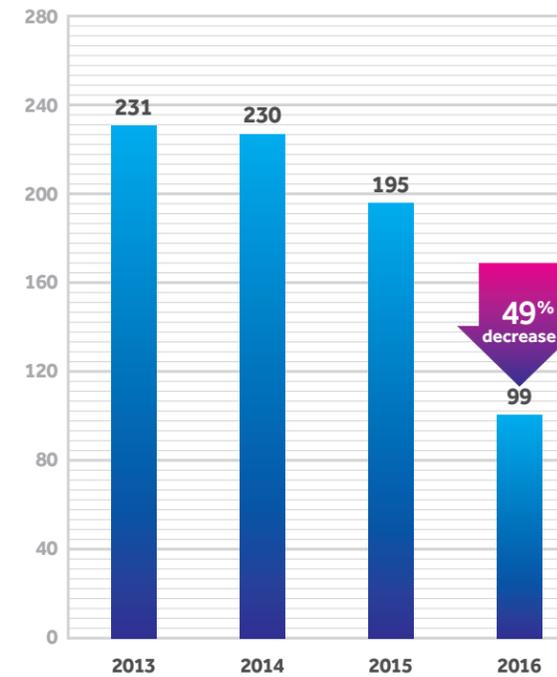
(EMISSIONS U.S. TONS)
Annual U.S. mercury emissions



(EMISSIONS MILLION KILOGRAMS)
Annual U.S. NO_x emissions



(EMISSIONS MILLION KILOGRAMS)
Annual U.S. SO_x emissions



Mercury and other emissions

Modernizing our fleet was also key in 2016. To do so, we made major environmental upgrades by adding backend emission controls to four older coal plants. This maintained base-load fuel diversity and eliminated the majority of several air contaminants from the plants' flue gas. Modifications made at the Powerton, Waukegan, Will County and Avon Lake plants reduced our sulfur dioxide emissions and kept the plants in compliance.

The charts above include emissions from NRG owned and operated generating stations. In 2016, our mercury emissions decreased 62 percent from 2015 and 85 percent from 2014. The reduction was driven by the installation of emissions controls on coal units and a decrease in coal-fired generation due to market conditions and fuel-switching projects.

Our SO_x and NO_x emissions decreased 49 percent and 35 percent, respectively, from 2015. Factors leading to the decreases include reductions in fleet-wide annual net generation and improved environmental controls. +

Water

Water availability and quality are important to our operations, the communities in which we operate and the environment. Operating our power generation facilities depends on sufficient amounts of available fresh, recycled, brackish and ocean water. The primary direct use of this water is the cooling of condensers during power generation. Small amounts of fresh water are used for steam creation and employee water, sanitation and hygiene.

We've designed our approach to water management with the understanding that water issues (usage, scarcity, quality and biodiversity) generally originate locally. In some regions, drought or flood conditions can threaten electricity production. In others, such as the Great Lakes and Ohio River Basin, fresh water is highly available. We're reducing the water required to produce electricity in the following ways:

- Using non-potable water such as brackish ocean water or grey water from sewage treatment plants
- Investing in more efficient cooling technologies that require less water
- Reusing water in cooling and boiler systems in our generating stations
- Installing variable-speed drives on circulating water pumps

Performance and management

In 2016, we reduced water withdrawal from the previous year by 23 percent (2.392 million cubic meters) through plant efficiencies, water management strategies and a net decrease in generation at coal plants due to market conditions. All NRG U.S. and international operating facilities have a written water management plan and established water management best practices. Some of those best practices include:

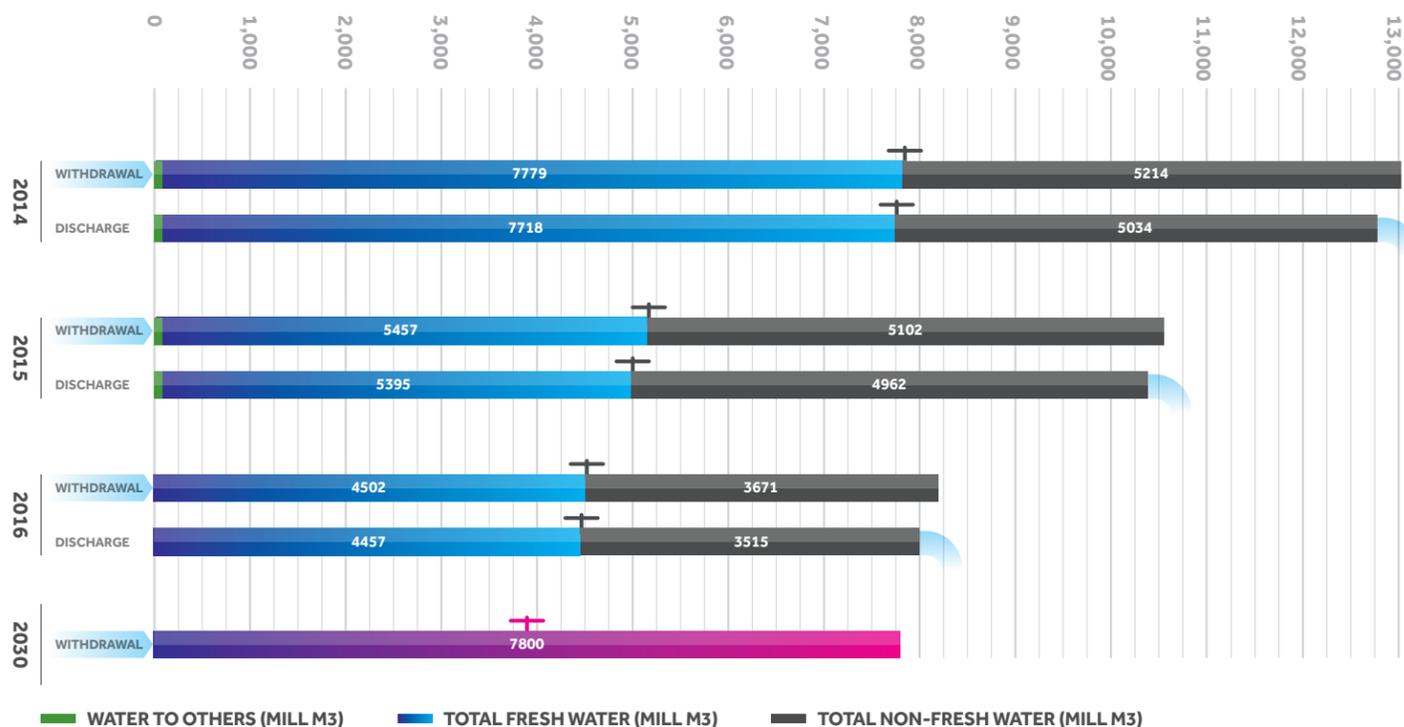
- Creating a plant or multi-plant water management team to evaluate conservation ideas, monitor and optimize water use, develop and review procedures and provide employee training
- Developing a water management plan that documents water sources, wastewater, optimal water use and water conservation and reuse/recycling goals
- Establishing a drought contingency plan in conjunction with local water authority recommendations
- Applying standard operating procedures to ensure consistent application of water management goals, annual review of documents and review of new technologies, ideas and best practices; they include written procedures to stay current with water supplier and water authority actions and requirements
- Training employees on standard operating procedures and communicating water management plans and drought contingency plans annually

For example, our Bowline plant installed variable-speed drives on circulating water pumps, which will reduce withdrawal rates by 25 to 75 percent.

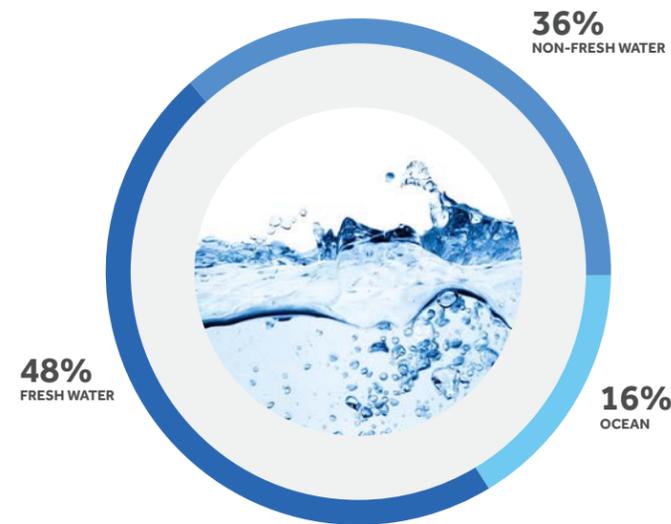
Our 2016 water data includes water withdrawal and discharge for all NRG generating stations (including international assets in Turkey and Australia) and offices (see chart). Our plants produced 106 million TWh of electricity and withdrew about 8.2 million cubic meters of water. More than 98 percent of this water is discharged to the same body of water from which it was drawn. Water withdrawal decreased from 2015 to 2016 largely because of a decrease in generation due to market conditions and some of our larger once-through cooling plants going offline for fuel switching.

In accordance with the federal Clean Water Act, we obtain all required permits and report results of water discharges to state agencies monthly. We have 77 wastewater discharge permits and ran more than 100,000 tests in 2016 of which 15 exceedances were found and promptly recorded. Exceedance information is entered in our incident management system, which notifies NRG operations management so we can identify the root cause and implement corrective and preventive actions. In 2016, we created a water issue task force to evaluate instances of water permit noncompliance, review corrective and preventive actions and share best practices to prevent recurrence. ✚

Water withdrawal and discharge (Mill m3)



Water withdrawal by source



Industrial waste

We work to reduce, reuse and recycle any material used in our daily operations. These efforts help preserve scarce natural resources and minimize their disposal. They also affect our bottom line and operational efficiency. The scope of our waste management programs includes both corporate offices and plant facilities; however, the information below focuses on municipal solid waste, e-waste, and nonhazardous and hazardous waste from our generation facilities. Learn more about our efforts to recycle or compost municipal solid waste and e-waste in **Sustainable Workplace**.

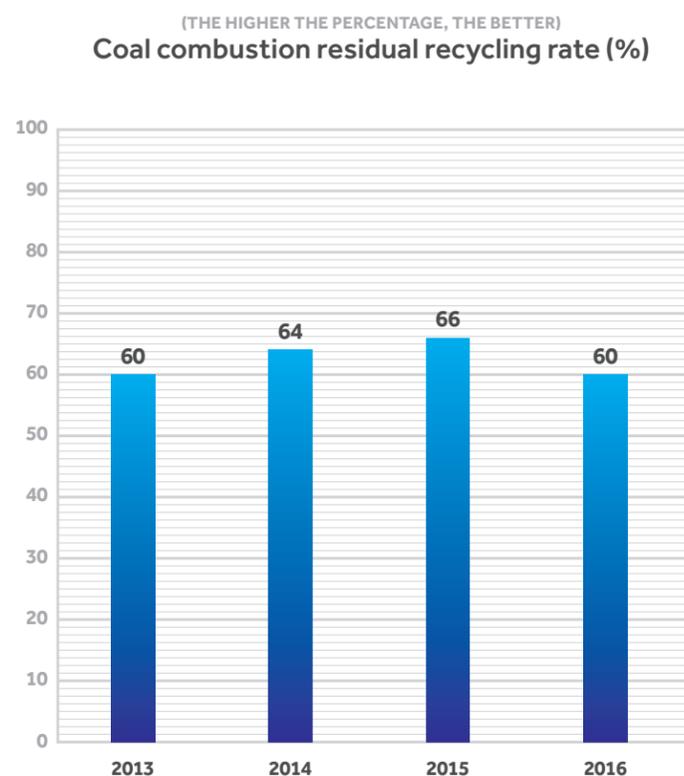
Waste management

Each NRG region has waste subject-matter experts who work with state and local governments, as well as other industrial waste generators, to ensure waste generation and disposal concerns are understood and addressed. We meet with stakeholders to address concerns about effluents and waste. The effluent and waste issues are local and vary by operating region. Stakeholder feedback is important and is used to meet present needs and plan for the future.

Effluents and waste

Effluents and waste are important to us as stewards of the environment. We use tools, such as state water quality studies and designations, the World Business Council for Sustainable Development water tool and the World Resources Institute's Aqueduct tool, to evaluate water effluent impacts. Should a wastewater permit exceedance occur, we conduct a risk review on each event to determine the root cause and implement corrective actions. The incident and corrective actions are shared across the fleet on biweekly conference calls with management. In 2016, we continued to enhance the current waste diversion program requiring NRG generating facilities to evaluate waste generated and identify recycling

opportunities. Facilities worked with business partners to create a waste reduction and recycling plan.



Coal combustion residuals

In 2016, NRG owned and operated facilities generated 2.7 million metric tons of coal combustion residuals (CCR), 1.6 million metric tons (60 percent) of which were designated for beneficial use as defined by the states. While that's a lower percentage of CCR for beneficial use compared to 2015, overall CCR production also declined 44 percent. The decline is due to less overall coal-fired generation because of market conditions and the lower overall availability of CCR for beneficial use due to fuel conversions and asset sales.

On April 17, 2015, the EPA enacted 40 CFR Section 257, entitled "Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals (CCRs) from Electric Utilities" and amended 40 CFR Section 261.4(b) effective on Oct. 14, 2015.

NRG impoundment structural integrity rating and hazard potential classification

	Less than Low	Low	Significant	High	Incised*
Satisfactory	0	6	5	0	0
Fair	0	0	0	0	0
Poor	0	0	0	0	0
Unsatisfactory	0	0	0	0	0
Not applicable	0	10	2	0	4

*Incised is an impoundment but is not subject to assessment because they do not have a dam. To align with EPA reporting, we've added a column for "Incised" and a row for "Not applicable" to account for all impoundments as defined by the EPA.

Note: Powerton Former Ash Basin will be evaluated by April 17, 2018, as required by the CCR regulation that is not in the scope of this report. It is therefore not included in the table.

This rule regulates the disposal of CCRs. We maintain a CCR Rule Compliance Data and Information page on nrg.com in accordance with 40 CFR Subpart D, Part 257, Section 257.107.

NRG has 28 surface impoundments defined by 40 CFR 257.2 as a facility or part of a facility that is a natural topographic depression, human-made excavation or diked area formed primarily of earthen materials. The CCR regulations require impoundments that meet the criteria of 40 CFR 257.73 to have a third-party professional engineer conduct a hazard potential classification assessment:

- **High Hazard Potential** includes dams where failure or misoperation will probably cause loss of human life.
- **Significant Hazard Potential** includes dams where failure or misoperation would not result in probable loss of human life but could cause economic loss, environmental damage, disruption of lifeline facilities or impact other concerns.
- **Low Hazard Potential** includes dams where failure or misoperation would not result in probable loss of human life and economic and/or environmental losses would be of low magnitude.
- **Less Than Low Hazard Potential** includes dams that do not pose high, significant or low hazard potential.

The EPA structural integrity rating defines the expected performance of dams under applicable loading circumstances:

- **Satisfactory** is defined as those dams where acceptable performance is expected under all required loading circumstance and no existing or potential safety deficiencies are recognized.
- **Fair** is defined as those dams where acceptable performance is expected under all required loading circumstances, yet minor deficiencies may exist that require remedial action and/or secondary studies or investigations.
- **Poor** is defined as those dams where a safety deficiency is recognized for a required loading circumstance, remedial action is required and further critical studies or investigations may be needed.
- **Unsatisfactory** is defined as those dams, considered unsafe, where a deficiency is recognized that requires immediate or emergency remedial action.

forNRG

forNRG, our continuous business improvement initiative, aims to enhance each department's profit and loss reports through innovative employee ideas. Many forNRG projects have environmental focus on areas like energy efficiency, water conservation and recycling.

A group of employees from our Dickerson Generating Station in Montgomery County, Maryland, turned one such idea into a cost-saving reality. Following the retirement of our Titus Generating Station in Pennsylvania, three dump trucks became available for use at another facility. The Dickerson team proposed they use the trucks to haul the plant's fly ash and bottom ash to the Westland Ash Site themselves, rather than pay a trucking company \$20,000 a month to do the work.

The six-member project team – fuel and ash technicians Nathan Miss, John Daniels, Toby Wolfe, Ed Lindsay, Jeff Ryan and Isaac Peyton – acquired commercial driving licenses to drive the trucks in addition to their normal jobs. Through five months in 2015 and all of 2016, the project has saved NRG \$340,000. The reused trucks themselves saved us \$200,000 in upfront costs. +

Environmental compliance: NRG Environmental Policy Statement

We're committed to creating value for our owners by managing our business in economically and environmentally responsible ways that focus on continual improvement. To succeed, we must:

- Meet or exceed applicable environmental laws and instill environmental responsibility in our employees
- Reduce our environmental impacts (including climate) by integrating environmental considerations into business operations and strategy, operating more efficiently and using cleaner, cost-effective technologies

- Promote stewardship and conserve biodiversity at our facilities and in our communities
- Seek constructive engagement in the legislative and regulatory process, as well as with environmental stakeholders, through honest, respectful and responsible dialogue
- Measure the effectiveness of our environmental program by tracking environmental performance and communicating our performance internally and externally

Management

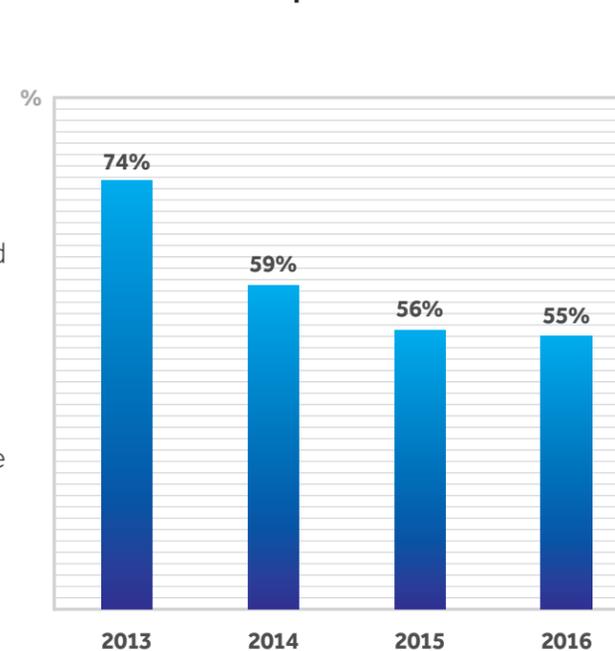
Our environmental management program provides the foundation for us to take NRG beyond just compliance with government environmental standards.

We assess our operations each month through our environmental key performance indicator (EKPI), which measures a number of leading and lagging parameters such as notices of violation (NOVs), reportable spills and compliance with laws. Our goal for 2016 was to have all our plants meet their plant-specific targets, and we achieved a 92 percent success result.

Site-specific EKPI is tied directly to the compensation of all employees at a given location, fostering collective accountability and environmental commitment within the workforce (EKPI measurement for AIP encompasses all full-time employees, union and non-union, at all generating sites). Before a plant can receive credit for its performance, it must pass through the environmental "gate," which requires completion of one or more proactive initiatives to minimize the environmental footprint of the site.

In addition, a portion of each eligible plant employee's compensation was tied to the combined environmental performance of his or her region; this incentivizes all locations to work together to collectively minimize our impact on the environment.

% OF BASELINE (LOWER IS BETTER)
Environmental performance metric



* As of Dec. 31, 2016
Note: The baseline grid is adjusted to include the history of sites that NRG began operating in 2015.

To continuously improve environmental performance, we use an environmental management system called Intelx. Intelx provides us the tools and transparency to efficiently track our generation fleet's environmental performance. We use Intelx Incident Management, Corrective Actions and root cause applications to report incidents, analyze root causes and ensure completion of corrective actions. In 2016, we received the 10 Years of Safety and Environmental Excellence Award from Intelx Technologies Inc.

The NRG Environmental Policy & Procedures Manual directs personnel at all NRG facilities to maintain environmental compliance in all activities and processes. An independent third party routinely audits each major facility, and we require prompt completion of both corrective and preventive actions for any negative findings or observations.

NRG's Environmental "Bingo Box" is a tool that communicates and tracks each power generation facility's completion of mandatory environmental initiatives. These initiatives are developed based on our performance and used as a proactive measure to improve environmental performance. Examples include developing site-specific environmental personnel transition plans (should key personnel be away unexpectedly), site-specific environmental operator boxes (an abbreviated list of permit limits, notification requirements, etc., for operators) and site-specific chemicals/fuel receiving and unloading procedures.

The figure to the left measures environmental compliance performance and illustrates a significant overall improvement since 2013.

Notices of violation

A notice of violation (NOV) is a formal written notification from an environmental regulatory agency that a noncompliance event by the company has been identified. It can be issued for any violation of law, regulation, permit, certification or license, regardless of significance. An NOV may or may not result in a fine; historically, the vast majority of NOVs issued to NRG have not included a fine.

A summary of NRG's 2016 NOVs and spills includes the following:

- 20 NOVs received during 2016; 13 included no penalty, four included fines totaling \$39,950 and one was a consent decree with a \$1 million penalty plus an additional \$1 million for special environmental projects*
- Six reportable oil spills releasing approximately 3.5 barrels into water and three barrels onto land
- Six reported unauthorized discharges of water from various systems, including storm water ponds, coal pile runoff ponds and low-volume wastewater systems, which released approximately 8,400 barrels +

econrg

econrg® is NRG's flagship program designed to make our existing fleet cleaner and help ensure that future power generation is smarter and more affordable. Through econrg, we promote ecological stewardship among our plant employees with initiatives aimed at improving environmental awareness and education.

In 2016, NRG plant employees participated in 224 voluntary econrg projects and NRG facilities donated \$75,325 to benefit the environment. These projects and initiatives focused on the following areas:

- **Biodiversity:** 50 projects included trout stream habitat enhancement, peregrine falcon chick banding, building an osprey nesting platform, humane bird abatement, stocking native fish in local rivers, and conducting migratory bird and reptile surveys
- **Water use:** 21 projects will save approximately 401 million gallons annually by reclaiming water, increasing total dissolved solids tolerances, making chemical treatment improvements, increasing pump efficiencies, educating employees on water-saving practices and collecting rainwater
- **Emission reduction:** 44 projects were aimed at reducing the consumption of natural resources by purchasing electric vehicles for employee commutes and installing LED lighting, high-efficiency variable speed drives, solar panels in remote areas and motion sensor lighting
- **Environmental stewardship:** 65 projects included beach cleanups, equipment donations, science fairs, in-kind technical support and fundraisers for college scholarships

2016 econrg Environmental Stewardship Award

The econrg Environmental Stewardship Award is given annually to employees who make a difference in their local communities and environment. A select panel of NRG's environmental leaders reviews submitted applications to determine the winner.

In 2016, our Chalk Point Generating Station in Aquasco, Maryland, brought home the award. The plant's employees took part in environmental initiatives spanning biodiversity, community involvement and resource efficiency. They maintain the plant's on-site Aquaculture Center, established a single-stream recycling and composting program and were involved in nearly 20 energy and wildlife conservation projects throughout the year. Read more about the Chalk Point Aquaculture Center on [page 24](#).

With its many conservation projects, runner-up Pittsburg Generating Station also embodied our commitment to the environment. Among other efforts, Pittsburg's employees helped clean up their community shoreline, volunteered at local school science and engineering fairs, and implemented a water conservation initiative. ✚

Biodiversity

Biodiversity promotes healthy ecosystems and human interaction with nature. That's why we designed our environmental policy to foster the protection of the natural habitats surrounding our generation sites. Protecting and promoting biodiversity ensures that living resources will remain in stable quantities in perpetuity. The air we breathe, leaves on trees and even a spider's web serve important biodiversity functions. It's our obligation to effectively use and protect all natural resources in a sustainable way.



Biodiversity SPOTLIGHT Cedar Bayou EcoCenter

We operate the Cedar Bayou EcoCenter on Galveston Bay in Texas to increase public awareness of the needs of the ecosystem, offer wetland education and develop solutions for coastal issues and restoration.

The EcoCenter is also a resource for unique partnerships with coastal restoration organizations, educators who support No Child Left Inside and groups creating public awareness of coastal issues. The EcoCenter plant nursery grows the majority of wetland plants used for estuarine restoration in Galveston Bay and sits on 14 acres of land consisting of 24 earthen ponds, six above-ground constructed ponds, a greenhouse, a classroom and a laboratory.

In 2016, we donated 113,000 plugs of smooth cordgrass that restored approximately 24 acres of intertidal wetlands. Our donations are critical to the restoration directives of more than a dozen third-party conservation organizations around the country.

Wetland education is an important component of the EcoCenter. Through a partnership with the Galveston Bay Foundation's Get Hip to Habitat program, area schools participate in a hands-on science module that includes wetland education, plant harvests, plant growth on school campuses, water chemistry and plant yield. At the end of the school year, the plants are used in coastal restoration. In 2016, more than 900 students from 14 schools visited the EcoCenter through the Get Hip to Habitat program.

Bee sustainable

In June 2014, former President Barack Obama released a White House memorandum outlining a federal strategy to promote the health of honey bees and other pollinators. Milkweed is the chosen habitat of one important pollinator, the monarch butterfly, and the EcoCenter provides a greenhouse and living shade structures for resource agency research on local milkweed species.

For two years, milkweed seeds have been collected, and scientific evaluations are under way to determine which species best meet the monarch's needs. In 2017, research will focus on determining which species the butterflies prefer, which species transplant the best to natural areas, and which species locals would be most likely to put in their yards.

Habitat creation and preservation

Beginning in 2016 and for the next five years, the EcoCenter will provide 4,800 square feet of shade structure to grow hummock plant species that provide habitat for colonial waterbirds such as tern, herons and egrets. Hummock plants are shrubs and trees that grow in coastal transition areas just above the high tide line. The trees are drought-resistant and soil/salt tolerant. Some hummock species include Carolina wolfberry, lime prickly ash, sugarberry, coral bean and prickly pear cactus.

Biodiversity SPOTLIGHT Chalk Point Aquaculture Center

Since 1985, the Chalk Point Aquaculture Center has participated in programs that help restore threatened fish species in the Chesapeake Bay by releasing millions of fish into the bay's watershed. Juvenile fish are raised at the facility, tagged and released into local waterways.

Working with the Maryland Department of Natural Resources, research and restoration projects have included species such as American and hickory shad, yellow perch, largemouth bass and Atlantic sturgeon. In 2016, the Aquaculture Center's efforts included:

- Releasing 46,500 bass fingerlings into various reservoirs and lakes for recreational fishing
- Donating fingerlings to the Baltimore Aquarium and Calvert Marine Museum
- Moving approximately 280 Atlantic sturgeon to the Aquaculture Center from the University of Maryland hatchery
- Releasing 45,000 American shad fingerlings into the Choptank River for restoration

The Aquaculture Center shares its resources with the surrounding communities to enhance environmental education and awareness. This includes staging live Atlantic sturgeon exhibits at various locations and sponsoring events such as Riverfest and the Patuxent River Appreciation Days festival.

Wildlife diversity at NRG sites

We're committed to attracting and maintaining biodiversity at our power plants by building nesting and resting structures for native wildlife. Examples of employee-driven projects at our generation stations include:

- Employees at our Vienna plant built and installed an osprey-nesting platform on the intake structure to replace an osprey-built nest that blew away during a winter storm. Within two days, an osprey began building its nest there, and it appears to have laid eggs. The nest is visible on a nearby security camera, so employees can monitor the osprey's progress.
- In winter, employees at the Mountain Wind and Spanish Fork wind farms remove roadside snow to give wildlife space to graze and help make them more visible to passing vehicles.
- Avenal solar farm seasonally grazes sheep beneath its solar panels to reduce the possibility of wildfires from dry vegetation. Choosing grazing over mowing and herbicides helps preserve the site's biodiversity integrity.

Endangered or threatened species

We've identified areas of operation that have documented endangered or threatened species of wildlife, according to the IUCN Red List species and national conservation list species:

- California Valley Solar Ranch has one critically endangered, two endangered and three least concern species
- Ivanpah Concentrated Solar Power Project has one vulnerable species
- Powerton Station has one endangered species
- Ormond, Mandalay and Pittsburg stations share similar beach habitats where one threatened species can potentially appear
- Buckthorn Wind Farm (under construction) has one endangered species



- Alta Wind Farm has one endangered species

All species and their respective habitats are addressed and mitigated through voluntary action plans, site permits, monitoring plans and conservation easements.

Ivanpah

Our Ivanpah Solar Electric Generating System necessitated the translocation of desert tortoises. As a part of the project's extensive desert tortoise protection program, we've helped establish a head start program at the Ivanpah project site. Head start

programs are crucial to the repopulation of the desert tortoise, a federally listed threatened species. In their natural environment, approximately two percent of juvenile desert tortoises reach breeding age due to factors such as predation, drought and disease. The head start program significantly increases their survival rate.

Biologists engaged by the facility have relocated all juvenile tortoises back into the wild. These tortoises will be tracked and monitored over the next five years, providing the project 10 years of valuable data.

In our ongoing effort to reduce avian mortality at the Ivanpah solar project, we created a pipe system that allows roadrunners to pass through facility fences. This reduces fatal collisions that are thought to result from roadrunners trying to evade predators.

Many regulatory agencies were involved in the nearly four-year permitting process of the Ivanpah solar project, including those that specialize in the protection of birds and other species. Ivanpah was reviewed and approved by the California Energy Commission and Bureau of Land Management with significant input and guidance from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. Learn more [here](#).

The Conservation Fund

The Conservation Fund received a **positiveNRG** grant to help support positive economic and environmental outcomes across the U.S. This includes the restoration of 30,000 native trees at Texas' Trinity River National Wildlife Refuge and our support of the Working Forest Fund program.

Working forests are developed with sustainable forest management plans that keep them intact. They're then returned to private ownership or public agency stewardship. In this way, each becomes a protected, working forest that boosts its local economy by maintaining jobs. The program has protected hundreds of thousands of forest acres and is active in each of the country's major timber-growing regions. ✚



Sustainable Customers

A key part of our business is enabling customers to achieve sustainable energy outcomes. In 2016, we provided more consumers and companies with access to cleaner, smarter energy choices through our Business Solutions team and our multi-brand retail business.

Business Solutions

Making sustainable attainable is a big part of what we provide our business customers through a wide range of solutions in four main categories: renewables, services, distributed and thermal.

From a sustainability perspective, these products and services give businesses greater reliability, cleaner power and other benefits they can't get from the grid. Specifically, our diverse portfolio includes system power, distributed generation, solar and wind products, carbon management and specialty services, backup generation, energy storage, distributed solar, demand response programs and energy efficiency tools and approaches.

Building on a long-standing position as a generator of wholesale power for the U.S. electric grid, our integrated platform empowers residential, commercial and industrial consumers by offering products and services that can be tailored to their specific energy needs.

Commercial and residential energy consumers seek to lower their carbon footprint without increasing their costs. They look to the power sector for innovative, customizable solutions that can help them achieve those goals. That's why we continue to advocate for open power markets where competition and innovation can flourish and attract capital.

Retail

To properly meet the needs of our customers' lifestyles and environmental goals, NRG's retail companies designed a variety of retail electricity plans, products and services. This portfolio is divided into three pillars of offerings:

- **Power:** Home and small business power products include electricity, natural gas, home solar, community solar, battery storage and backup power

- **Services:** Home and small business products include energy checkup, control and energy management, monitored security, home maintenance and installation
- **Portable Power:** Portable power includes consumer power products people buy and take with them – portable solar, portable batteries, emergency/ outdoor lighting and power stations

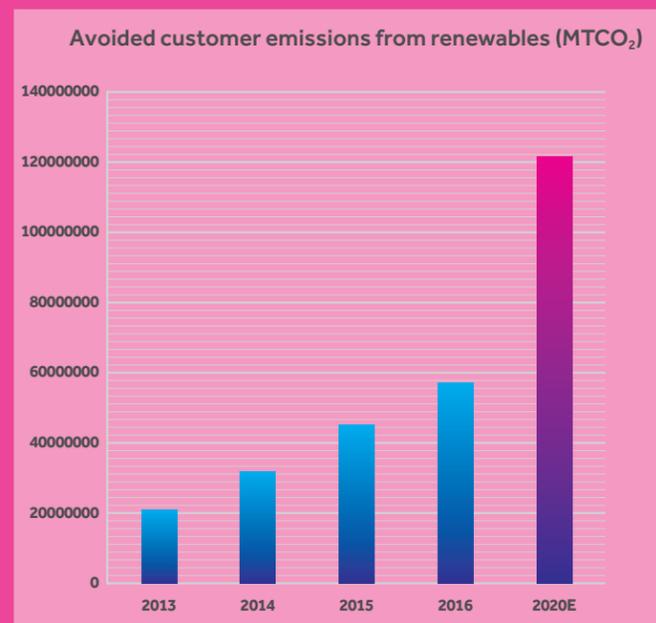
In 2016, our retail business delivered nearly 42 terawatt-hours of energy and served approximately 2.8 million recurring customers. That makes it the largest competitive mass-market energy retailer in the U.S. and Texas and one of the top six mass-market energy retailers in the East and Midwest. Our retail brands are recognized for exemplary customer service, innovative smart energy and technology products, and environmentally friendly solutions.

In the energy industry, competitive markets benefit customers in several ways. Competition creates innovation, which empowers customers with more choices, increased cost efficiencies and higher-quality products and services. ✚

Goals and performance

Our Sustainable Customers goals are:

- Help customers avoid 120 million Mt CO₂e of GHG emissions by 2020²⁴
- Make sustainability among the top reasons to choose NRG for 50 percent of our commercial and industrial (C&I) customers²⁵



We have anecdotal evidence that customers value our leadership in the renewables space, but we're developing a data-collection process in 2017 to help us better measure and quantify this indicator.

²⁴ This is a cumulative absolute number based on the total renewable megawatt-hours generated by our Renewables, Business Solutions and Green Mountain Energy businesses.

²⁵ This will be measured through Voice of Customer mechanisms assessing why C&I customers chose us as their energy partner over other providers.

Business Solutions

This team makes sustainability a reality for organizations by developing customized energy solutions based on their needs. These solutions include demand response, renewables, thermal, commodity sales, energy efficiency and energy management services. Responding to the business goals of ROI-driven companies, our projects span multiple industries and range from 100 MW utility-scale renewable solutions to off-grid power solutions that employ small wind turbines and battery storage. See a complete list of offerings [here](#).

On-site solar

Many companies look to reduce their dependence on traditional energy generation while cutting operating costs and maintaining business performance. Our on-site solar solutions help corporate sustainability leaders meet these goals.

Cisco

We developed a 20 MW solar energy facility that will generate power for Cisco's San Jose headquarters and surrounding Bay Area locations. The partnership aims to help the facility reach its goal of using renewable sources for at least 25 percent of all its electricity needs by the end of 2017.

Whole Foods Market

We began developing an energy solution for Whole Foods Market as bright as its corporate values. The rooftop solar installations will increase the amount of clean, onsite renewable energy used by its stores and distribution centers across multiple states.

With some sites scheduled to launch in 2017, the NRG team spent most of 2016 diligently moving through the development process for the sites within each state.

MGM Resorts International

We completed construction on one of the world's largest rooftop solar photovoltaic arrays. Located at the Mandalay Bay Resort Convention Center in Las Vegas, the installation is expected to displace approximately 8,400 metric tons of CO₂ annually, equal to taking more than 1,700 cars off the road.

Using Ten K Solar's innovative REFLECT system, this rooftop installation produces 25 percent of the power demand for Mandalay Bay at peak production. It also lowers demand on the southern Nevada electricity grid during times of peak electricity demand and removes the need to import power, reducing energy costs for the entire city. It's part of our commitment to helping our enterprise partners meet their renewable energy goals. Learn more about the Mandalay Bay installation [here](#).

Strategic partnerships

We're turning sustainable energy into reality through customized solutions that can meet both environmental and economic goals.

Preferred resources

Working with Ice Energy, we are in the early stages of deploying their Ice Bear® technology in Southern California. This system transforms inefficient and polluting air conditioners into efficient and cleaner cooling systems. It also reduces power consumption and carbon dioxide emissions.

Along with reducing electric bills for commercial and industrial customers that enroll in our program, this

breakthrough technology will enable us to improve the efficiency and reliability of the electric grid in Southern California.

Vital to optimizing the sales process for the Ice Bear technology is the NRG-developed SpaceTag™ platform, a patent-pending geospatial analytics software platform. Using technology built in-house, the platform determines the compatibility of different buildings across a target region for distributed energy products by harvesting, synthesizing and analyzing massive amounts of data for business locations.

The platform has multiple applications and enables the NRG team to automatically identify the best solutions for each customer, making the potential customer identification and acquisition process more accurate and efficient. The SpaceTag™ platform is currently being leveraged to target customers for the Ice Bear program and other distributed energy solutions within different utility territories.

Energy storage

The ability to store energy during peak renewable production and deploy it when the sun and wind are unavailable is crucial to the power systems of the future. Battery storage remains one of the most expensive energy technologies, but its performance and costs continue to improve.

In August 2016, we joined a research initiative with Microsoft and the University of Texas at San Antonio's Texas Sustainable Energy Research Institute to explore the battery's role in a grid increasingly powered by renewables. The initiative looks at the performance of flow battery technology and its potential to reduce renewable energy losses and improve grid reliability.

Demand response

Demand response means committing to use less energy when more is demanded of the electric grid. End users may receive financial incentives to use less during critical times. For utilities, these commitments lower the potential for brownouts and provide an alternative to building new plants or investing in expensive capital improvements.

NRG Curtailment Services

Energy demand is ever-increasing, but the NRG Curtailment Solutions demand response provider allows consumers to help keep the grid stable and earn valuable cash payments or bill credits by lowering power consumption during specific time periods when the grid is under stress.

Utilities and regulatory commissions across the continent are setting goals to increase energy supplies from renewable resources and decrease reliance on costly power plants, and demand response has become an increasingly important component of electrical system planning in North America.

Our portfolio of strategic programs is designed to advance the energy objectives of commercial and industrial companies. Positioned in six key markets

(NYISO, PJM, ERCOT, CAISO, ISO NE, IESO), we craft each of our offerings to meet and exceed the requirements of a fast-paced, ever-evolving regulatory landscape.

NRG Reliability Solutions

With NRG Reliability Solutions, business consumers don't have to turn anyone away due to an outage. We deliver custom, quality energy solutions to hundreds of businesses and organizations across the U.S. Our power generation capabilities are tailored to fit each customer, from retail stores and schools to industrial refineries and water treatment plants.

As a single-service provider, we own, install, operate and maintain the equipment that powers our customers' businesses. We also manage every stage of every project, which allows our customers to focus on what they do best – run their business.

Sustainable Energy Advisory

Launched in late 2016, NRG's Sustainable Energy Advisory helps organizations realize the full potential of their sustainability goals. We understand that constant change makes it difficult to establish, prioritize and execute sustainability strategies. Regardless of where our customers are in their sustainability journey, we draw from our deep sustainability and energy experience to design custom sustainability goals, strategies and solutions to make sustainable attainable. Learn more [here](#). ✦

Community solar

The idea behind community solar is simple: empower people to tap into clean and renewable solar energy even when their homes or businesses can't support solar panels. The demand for solar energy has increased. Oftentimes, however, those who want it most are excluded because they live in an apartment or townhome community or their roofs simply face the wrong direction.



Our largest U.S. community solar project came online in 2016 in Spencer, Massachusetts.

Community solar solutions make it easier than ever to enjoy the economic and environmental benefits of solar power – no roof required. Users sign up to join an off-site solar garden near their community. Once assigned, they have the opportunity to reduce their average energy bills over the course of their lease. They also potentially share the cost of a solar installation with their neighbors and collectively reap the benefits of clean and renewable solar power.

In 2016, we further developed our community solar business to serve the needs of more than 2,670 residential and commercial customers in Massachusetts and Minnesota:

- **Spencer, Massachusetts** – Our largest community solar project in the U.S. came online in 2016; it serves the electricity needs of more than 1,500 residential and commercial customers
- **Pepperell, Massachusetts** – In 2016, this community solar farm began providing power for approximately 170 households; residents in apartments, townhomes and homes now have access to affordable solar power

- **Minnesota Community Solar** – Scheduled to be online in 2017, more than 1,000 residents and several large businesses, such as U.S. Bank, Land O'Lakes and Macy's, have already come onboard ✦

Utility-scale

In November 2016, we announced the acquisition of more than 1,500 MW of utility-scale solar and wind projects that are either completed or in varying stages of development across the country, significantly increasing our renewable footprint. These assets provide access to new markets for our renewables group, where we expect to leverage the capabilities of our integrated cross-functional platform. ✦

Retail

NRG retail brands seek opportunities to enhance people's lives by providing American consumers and small businesses with sustainable energy solutions. In 2016, we developed new ways to power people at work, at home and on the go while delivering outstanding service to 2.8 million retail customers. We also entered new territories, enabling us to serve more residential and small business customers in key competitive markets.

Goal Zero

Focused on powering individuals wherever they are, we launched new leading-edge innovative portable power products from Goal Zero. One example is the new generation of versatile Yeti™ power stations, featuring a design that won the prestigious Innovation Award from the Consumer Electronics Show (CES). We've opened up new possibilities for remote explorers and provided everyday adventurers the power they need when they're on the go.

Green Mountain Energy

Green Mountain Energy (GME) is one of the NRG retail companies with a growing multi-state presence. GME is the nation's longest serving company dedicated to providing 100 percent renewable energy and continues to be among the nation's most trusted names in renewable energy.

In 2016, GME partnered with the Texas Parks & Wildlife Department (TPWD) to provide the organization innovative and cost-effective solar and smart-meter solutions. Additionally, GME will provide energy solutions to all TPWD facilities in deregulated areas with 100 percent renewable energy, supporting the TPWD's mission to manage and conserve the state's natural and

cultural resources for the use and enjoyment of present and future generations.

GME also signed an agreement with the 8,000-acre Mohonk Preserve in Gardiner, New York, to provide clean electricity to power the site's facilities. Mohonk's protected forests absorb 9,105 metric tons of CO₂ each year, and this clean-power commitment further combats climate change by supporting the expansion of our nation's renewable energy footprint. By teaming up with GME, Mohonk is projected to avoid an estimated 307,700 pounds of CO₂ per year. That's equivalent to:

- Keeping 339,362 car-driven miles off the road
- Planting 31,675 trees
- Replacing 4,886 incandescent light bulbs with LEDs

Recognition for our service

In Texas, Reliant and GME were both named to the Texas Electric Retailer Trusted Brand List. Additionally, NRG Retail won the Customer Engagement Award at the SAP4U Excellence in Utilities Awards. The award is given to a utility company that surpasses the digital needs of its customers and shows an immense commitment to rethinking the way utilities interact with consumers.

For the third straight year, NRG brands have been awarded the highest J.D. Power® customer satisfaction score among retail electric providers. In 2016, GME was No. 1 in Pennsylvania and Massachusetts and No. 2 in New York. ✦

Lead in the East



Lead in Texas



NRG Retail Business Units

POWER	Electricity	Solar (all kinds)	Natural Gas	Back-up Power

SERVICES	Security Services	Home Management	Home Services	Protection Plans

PORTABLE POWER	Portable Solar	Portable Batteries	Lighting	Power Stations

NRG Brands





Sustainable Suppliers

In today's global economy, virtually no organization is fully vertically integrated. This makes sustainability relevant across a company's entire value chain. After setting an ambitious goal addressing downstream avoidance of greenhouse gas emissions, NRG is one of

the first in its industry to include its supply chain as part of its internal sustainability commitments. Not only does this make sense in terms of improving social and environmental responsibility upstream, it also makes strong business sense because sustainable supply chains are inherently more efficient, transparent and resilient.

Organizations in other sectors that engaged their suppliers on sustainability invariably generated cost savings in the process. Corporate buyers are extending their sustainability commitments to suppliers like us, and sectors are developing standards and frameworks for the sourcing and distribution of their products. Supply chain management and transparency is increasingly integral to business and sustainability strategy. Enhanced disclosure regarding our supply chain will help us reduce costs, mitigate risk, ensure business success and safeguard our reputation.

We recently initiated a materiality assessment to uncover risks and opportunities within our multi-billion dollar supply chain. The assessment will cover all major categories of procurement spending, including fuels, generation equipment, engineering, procurement and construction. We'll also become the first major power producer to participate in CDP's supply chain program, which will enable us for the first time to establish an upstream emissions and water footprint. The insights gained will help guide our efforts to reduce risks, enhance efficiency and create business value. ✦

5 MAIN CATEGORIES of NRG SUPPLY CHAIN



Fuel



Operations and maintenance (O&M)



Sales, general and administrative (SG&A)



Engineering procurement and construction (EPC)



Renewables

Goals and performance

Our Sustainable Suppliers goals are:

- Achieve GHG and water disclosures from 80 percent of major suppliers by 2020²⁶
- Reduce supply chain carbon and water intensity 25 percent by 2025²⁷
- Develop and implement NRG responsible sourcing principles²⁸

NRG's supply chain consists of a wide range of procurement activities, including fuel purchases, operations and maintenance, renewables, capital projects and services. Although we've diligently managed our supply chain for quality and efficiency, supply chain sustainability is a more recent focus. As such, we need to collect data and develop baselines to inform our supply chain sustainability. That's why in 2016 we decided to seek out a third party to conduct a key issues assessment of our supply chain, map our value chain and benchmark us against our peers. Starting in 2017, the results of this effort will inform how we address material supply chain issues in the context of the business and the company's overall sustainability strategy.

As mentioned, work is under way to drive these goals. The content in this section is based on available data from our industrial supply chain. In 2017, it will reflect comprehensive data from all parts of our supply chain as our work progresses.

The chart to the left illustrates NRG's overall supply chain spend by category in 2016.

²⁶ Collection is from top suppliers representing 90 percent of our spend through CDP's supply chain program. Participation data will be released annually by CDP.

²⁷ Baseline development is under way.

²⁸ We'll look for opportunities to further integrate sustainability into the supplier selection and management decision-making process.



Management

Safety also comes first in our supply chain management approach. All suppliers providing on-site services must be prescreened for safety through our supplier registration portal. That's the first step in doing business with NRG, and failure to meet our safety standards can result in disqualification. Other factors considered when evaluating a supplier's fit for NRG include but are not limited to diversity certification/ registration, audited financial statements, D&B reports, performance, quality programs and insurance. Access the supplier portal [here](#).

Additionally, the NRG Standard Terms and Conditions and Supplier Code of Conduct govern the relationship between NRG and our suppliers. We have the ability to terminate contracts and relations with suppliers under these Standard Terms and Conditions should we view the performance of the supplier as unacceptable or outside of the agreed-upon performance delineated in the Standard Terms and Conditions and/or the Supplier Code of Conduct. Both documents can be found [here](#). These policies apply to all suppliers and were last updated in May 2015 (Standard Terms and Conditions) and June 2014 (Supplier Code of Conduct). Our Operational Excellence team within the supply chain is responsible for a yearly review of policies in conjunction with a committee consisting of supply chain management.

Each supplier must also adhere to our STRIVE values, which are detailed in the Supplier Code of Conduct. These values, while not a policy, are a longstanding philosophy at NRG, and we expect employees and suppliers alike to follow them. Find our STRIVE values [here](#). +

Supplier selection

Supplier selection is a multilayered process. We first identify suppliers through various methods, including but not limited to existing relationships, referrals, matchmaking events, trade shows and conferences. As part of this effort, our supply chain diversity coordinator leads a program dedicated to identifying small and women-owned businesses to partner with us across all functional groups. Suppliers are required to register in our third-party supplier management portal, and suppliers providing on-site services are evaluated for safety. Failure to meet applicable safety requirements will result in disqualification or conditional qualification, which requires additional documentation and an improvement plan. Suppliers of environmental services, such as handling of hazardous or non-hazardous waste, are audited to determine eligibility. Suppliers are also required to submit certificates of insurance to ensure compliance with our minimum insurance requirements.

While suppliers must successfully submit their profiles and complete the evaluation process to perform services at NRG, the evaluation process may be conducted before, after or simultaneous to a bid event. Bid events are generally required for purchases greater than \$50,000. In a bid event, suppliers are invited to bid for a specific product or service. Suppliers are provided a timeline and asked to submit a detailed proposal based on the statement of work or requirements provided by NRG. These bid events are managed within a third-party portal through a top supplier to the utility industry. In addition to managing bid events, the portal provides spend analysis based on historic NRG supply chain data and cost analysis based on market data. A bid event may last days, weeks or months depending



LOCATED
PRIMARILY WITHIN U.S.

on the complexity of the product or service being sourced.

The events are managed by supply chain professionals who work with departmental or operational subject-matter experts to select suppliers based on various factors, including but not limited to quality, reputation, proposal, price, environmental, social, and governance (ESG) objectives, time restrictions and scarcity of product/service.

Once selected, the supplier is engaged throughout the completion of the project awarded or the services/materials to be delivered. Sourcing specialists are responsible for maintaining relationships with suppliers within their assigned categories or plant location. +

Strategic sourcing

In addition to general bid events, our strategic sourcing team is responsible for identifying opportunities for strategic agreements across our fleet of generation stations. We invite national and regional suppliers to participate in strategic bid events that result in long-term contracts (2-3 years) for national or regional services to our fleet. Strategic suppliers are assigned to category managers on our strategic sourcing team. The category managers are responsible for maintaining relationships with strategic suppliers within their categories and scheduling quarterly or biannual business reviews to discuss various topics, including

but not limited to safety, value creation, ESG initiatives, market outlook, KPIs, spend and areas for improvement.

To achieve economies of scale in our purchasing, we will enter into contracts with national suppliers that provide miscellaneous office and administrative goods and services (e.g., travel-related products, office supplies, IT software or hardware). Also due to the nature of our business, specialized goods and services needed for the operations and maintenance of NRG generation assets are obtained from a limited number of domestic and international manufacturers. Under certain circumstances, we may elect to use a local sourcing strategy rather than a regional/national approach. We have a supplier diversity program that works to achieve established goals with the Small Business Administration for the utilization of diverse businesses across a variety of different categories, including but not limited to women, minority, veteran and HUB zone-owned businesses.

In addition to leveraging spend, strategic sourcing allows us to guard against the threat of a shortage of skilled labor. We mitigate this risk through long-term contracts and strong supplier relationships. Pre-negotiated terms allow for better lead times, and suppliers are motivated to devote resources to NRG by knowing we're a committed strategic partner. Several of our strategic suppliers consider NRG a key account, thereby increasing the likelihood that our needs will be met. +

Standards and policies

The NRG Standard Terms and Conditions require that suppliers comply with all applicable laws and regulations. The Standard Terms and Conditions can be found [here](#).

We conduct audits of all treatment, storage and disposal (TSD) facilities where our hazardous, industrial and universal waste streams are disposed. We work closely with our waste suppliers to identify and audit

their TSD facilities before commencing services. The focus of the audit is primarily environmental compliance, ensuring that both the supplier and TSD facility are compliant with all applicable laws and regulations. We have strategic relationships with a limited number of waste suppliers whose TSD facilities are audited every five years to maintain compliance. Because of the environmental sensitivity of waste hauling, we maintain strategic relationships with key waste suppliers and do not regularly add new waste suppliers to our supply chain.

Most high-volume materials are purchased by various units of measure with no direct correlation to weight or volume. With the exception of 26 miles of transmission from our wind farms, NRG does not own or operate distribution. Materials used in the generation of electricity include fuel, chemicals for wastewater treatment and air quality control equipment and maintenance. We have a chemical management plan in place that covers reviewing all chemicals before

they can be used on-site; managing the handling and delivery of chemicals to ensure best practices and avoid the need for disposing of chemicals past their shelf life; secondary containment; and emergency response. Any transformers or PCB-containing equipment on our property were converted to non-PCB materials a number of years ago. ✚

Conflict minerals

In September 2014, NRG acquired Goal Zero, a provider of portable solar power and battery pack products and accessories. Goal Zero conducted an analysis of the materials used in the production of its products and determined that substantially all of its products may contain conflict minerals. Conflict minerals are tin, tantalum, tungsten and gold and are referred to as 3TGs.

Goal Zero's supply contracts require suppliers to represent and ensure that they supply Goal Zero with

only 3TGs that are "conflict free" unless otherwise agreed to by Goal Zero. Goal Zero also requires that its suppliers agree that they will inform all of their own suppliers of this policy and ensure that it is complied with throughout the supply chain. Goal Zero reserves the right, in its contracts, to audit its suppliers' compliance at any time and to terminate supply agreements if there is a material breach of the agreement.

In addition, in 2016, NRG adopted manufacturing standards that all Goal Zero suppliers will be required to comply with. The standards address compliance with laws and regulations and require suppliers to abide by the applicable laws and regulations of the country in which they do business, including, but not limited to, laws related to labor practices, health and safety, environmental responsibility and anti-corruption. The standards also set requirements based on industry best practices and international conventions, including those related to 3TGs.

Goal Zero does not directly manufacture any products. Goal Zero contracts for the manufacture and assembly of its products through a competitive global supply process. The suppliers then source both raw materials and purchased parts. Goal Zero has 16 direct material suppliers globally, and there are generally multiple tiers between the 3TG mines and Goal Zero's direct suppliers. Therefore, we rely on the direct suppliers to provide information on the origin of the 3TGs contained in components and materials supplied to Goal Zero, including sources of 3TGs that are supplied to them from lower-tier suppliers. Contracts with Goal Zero's suppliers are frequently in force for multiple years, and we can't always unilaterally impose new contract terms and flow-down requirements. As we enter into new contracts, we require Goal Zero's suppliers to provide information about the presence of conflict minerals in the products supplied and about the smelter sources of any conflict minerals. Read the full report submitted to the SEC [here](#). ✚



Alta Wind Facility in Tehachapi, California.



Sustainable Workplace

The energy future we envision requires involvement from all our approximately 8,500 full-time employees (as of Dec. 31, 2016). Providing a sustainable work environment helps us align our actions with our core values, vision and mission. This means providing a workplace that allows our employees to execute at the highest levels and return home safely to their loved ones. It means actively engaging in our communities and supporting our partners. It means investing in our colleagues and supporting causes and organizations in which we believe. Ultimately, we're a product of the people and places that surround us, and ensuring a sustainable workplace is important to our work and how customers, suppliers and communities perceive us.

We've established goals that will help all our offices and facilities become truly sustainable workplaces by 2020. We're also developing a strategy to measure, report and improve our efforts to reach those goals. That includes tracking program participation, increasing employee engagement and benchmarking companywide participation in all NRG sustainability initiatives. By cultivating a sustainable workplace, we will cultivate sustainability advocates throughout the organization.

Princeton headquarters

Opened in June 2016, NRG's 130,000-square-foot LEED Platinum headquarters in Princeton, New Jersey, embodies the ways we're realizing the potential of energy, together. Everything, from the way the building is powered to its interior design, enhances our workplace culture and showcases the technologies and products we offer.

After Hurricane Sandy in 2012, we decided to create a safe, reliable workspace that can endure the most extreme weather conditions and support critical 24/7 business operations. Our headquarters represents the intersection of our business and sustainability objectives beautifully and effectively by showcasing a variety of cleaner, versatile and highly efficient energy and water technologies we offer our customers.

Highlights of the building's energy systems and design features include:

- **Solar photovoltaic (PV) panels:** The rooftop solar wing showcases the power of renewable technology for passersby while providing shade and scenic views for employees and visitors. The parking lot solar canopies help keep cars cool but also generate clean energy and aid in rainwater capture. The combined installations generate about 30 percent of the HQ's annual electricity use. During sunny periods,

however, solar generation can exceed our demand and cause the meter to actually spin backward.

- **Green roof:** The green roof helps with waste diversion, storm water management, air quality and building insulation in summer and winter. That means less energy used by the HVAC system.
- **Wind turbines:** A pair of horizontal wind turbines, similar to the ones we installed at Lincoln Financial Field, home of the Philadelphia Eagles, represents our nationwide utility-scale wind portfolio.
- **Solar thermal system:** The solar thermal system uses the sun's energy to heat water for the building's bathroom, kitchen and gym facilities.
- **Rainwater capture system:** Rainwater from the roof is fed underground into four 15,000-gallon cisterns (two on-site locations) and used for non-potable water needs such as toilet flushing. This helps save approximately 150,000 gallons of local water annually.
- **On-site generation farm:** Our combined heat and power (CHP) plant can generate most of the building's annual electricity demand while also producing thermal energy to supplement HVAC needs. Conventional central power plants typically have a combined 45-percent efficiency. Thermal energy from the CHP plant also assists with baseboard heat and an ice-melting system in the sidewalks. A 45-ton absorption chiller also converts residual heat from the CHP plant into cooling for our trade floor and main data center.
- **Generators and energy storage:** Two generators – one diesel and one natural gas – are ready to kick in if we lose power from the grid or demand response warrants their use. Our lithium-ion battery storage system further supports demand-response capabilities and solar PV energy smoothing.
- **Daylight harvesting:** All the building's light fixtures connect to sensors that gauge the presence of natural light. On sunny days, lights near the windows are either off or dimmer than those closer to the building's interior. This feature allows us to better manage our energy consumption and save money. ✚

Goals and performance

Our 2020 Sustainable Workplace goals are:

- Have 100 percent of our offices engage in sustainability initiatives²⁹
- Get 50 percent of our employees sustainability certified³⁰
- Have 75 percent of our employees active in sustainable workplace programs³¹
- Achieve 90 percent office waste diversion³²
- Have 50 percent of employees cite sustainability as a top reason to recommend NRG as a place to work³³

Baselines and methodologies are being developed for these goals, and progress will be communicated as these efforts unfold. The following sections highlight some of the programs that will help us achieve these goals. As mentioned, efforts are under way to realize and report against them.

²⁹ Every workplace will take part in at least one sustainability-focused project via community engagement or volunteering. We'll align this program with our successful **econrg** and **positiveNRG** initiatives.

³⁰ An internal education and certification program will empower employees to use sustainability as a strategic decision-making tool. This training is in development in 2017.

³¹ The definition of "active" and the list of qualified programs are under development in 2017.

³² Office waste is defined as municipal solid waste sent to landfill. This applies only to NRG offices because industrial waste is part of our Sustainable Operations program. We'll conduct an audit of office waste streams in 2017 to establish a baseline and begin tracking.

³³ We'll conduct an internal survey of employees to begin tracking.

Wellness

To keep our employees healthy, happy and operating at their best, NRG provides several wellness benefits. We offer full and part-time employees scheduled to work 20 or more hours per week health, dental, vision and life insurance, mental health assistance, a non-tobacco user discount, adoption assistance, parental leave and tuition reimbursement, among other benefits. Additionally, we sponsored more than a dozen runs, walks and bike rides to promote healthy behavior and hosted more than 25 employee health fairs in 2016 at NRG locations across the country.

Power up my life

In 2016, we expanded **Power up my life**, our employee wellness initiative, to further incentivize physical and mental well-being among our workforce. With a participation rate of 52 percent, it continues to be one of our strongest employee initiatives.

Employee engagement and innovation

We understand to create a sustainable energy future requires a talented workforce operating at its best. We provide our nearly 8,500 employees the opportunity to work together to find new and innovative ways to realize the potential of energy.

InspireMENrg

InspireMENrg is a web-based and mobile platform where NRG employees can take actions that reflect sustainable choices at work and home. More than 30 percent of our employees use InspireMENrg, and relevant monthly projects keep employees motivated. In 2016, the most engaging topics included professional development, energy efficiency, recycling and discounted sustainable offerings such as Goal Zero products. Employees completed 122,733 actions equal to more than \$70,000 in savings from avoided emissions, energy, fuel, water and waste.

InspireMENrg also proved to be a great tool for interdepartmental collaboration. Our Sustainability and HR teams used the platform to boost employee engagement in a professional development campaign. We saw a 15-percent boost in profile completions on our new human capital management system, and nearly 3,000 professional development actions were taken on InspireMENrg related to the campaign. Learn more about the partnership [here](#).

Innovation Co-Lab

Almost 100 employees across the country participated in the fourth annual NRG Co-Lab competition, a companywide contest built on collaboration. Driven by innovation and a \$10,000 prize, each team developed concepts and action plans focused on solving business challenges like creating a sustainable energy future, safety, delivering value to our stakeholders and more.

For the final round, 28 employees came to our new headquarters to "pitch" to a panel of NRG executive judges. People from different backgrounds and business units came together on each team. Some had people with decades of experience; one team was made up of newcomers fresh out of college. The winning team, comprised of all women, identified a creative way to manage coal ash while avoiding cost, reducing risk, increasing recycling capabilities and generating revenue.

For the first time, the Co-Lab competition finals were live-streamed so employees at all NRG locations could watch and cheer on their colleagues. Also new this year was the Co-Lab microsite. This gave employees a place to get more information, find other teammates and stay up to date with the competition.

NRG Gigs

Gigs is a talent marketplace and career development resource hosted on our company intranet, the Insider. It features original content that's updated weekly. In its second year, Gigs was consistently among the most

engaging topics in our weekly company news email to employees.

Flexible Work Policy

To reduce employee commuting and our carbon footprint, NRG introduced a Flexible Work Policy in November 2016 that provides eligible employees the opportunity to occasionally work remotely and/or work an adjusted-hours schedule. The policy enhances our workplace culture, supports our commitment to sustainability and improves our employees' ability to balance work and personal commitments – all while preserving business continuity and performance.

Power plant eco-warriors

Employees at NRG's Canal Generating Station wanted to offset the CO₂ created by their daily commute. Using carbonfund.org's business calculator, they tallied their annual total and purchased credits to offset more than 230 metric tons of CO₂. ✚



A Year in Numbers

4,482 NRG EMPLOYEES enrolled in Power up my life

452 SPOUSES/DOMESTIC PARTNERS enrolled in Power up my life

2,769 PARTICIPANTS completed Know Your Numbers

3,224 PARTICIPANTS completed the Well-Being Assessment

2,314 PARTICIPANTS reached Plugged In

2,014 PARTICIPANTS reached Charged Up

1,630 PARTICIPANTS reached Energized

1,421 PARTICIPANTS reached Transformed

291 NRG teams participated in the GET MOVING challenge

2,037 PARTICIPANTS in the GET MOVING challenge

2,208,455,183

TOTAL steps taken by NRG teams during GET MOVING Challenge



Employee recruitment and retention

The greatest potential of NRG is its people. In 2016, we took a fresh look at our employee initiatives to expand the ways we attract, inspire, develop and thank the people who power us.

Employer brand

We launched a new employer brand and created accompanying recruiting resources (e.g., an employer brand video, career fair assets, flyers). Additionally, we increased our recruiting efforts through social media and platforms such as Indeed, Glassdoor and CareerBuilder. Check out our new employer brand video [here](#).

Leadership development

In 2013, NRG began introducing three levels of leadership development programs to our employees. We covered two of the three levels in 2016, training 75 leaders in "The Leader's Edge" and "Leading for Success" classes. Both programs emphasize leading people, teams and change – areas that provide a competitive advantage in a fast-moving organization such as ours.

Career development

In 2016, we launched a new performance module on our human capital management system, SuccessFactors. Throughout the year, we encouraged employees to focus on performance, employee development and career development by showcasing the many avenues they can use to drive progress year-round. Additionally, we conducted well-received workshops in Houston and Princeton. As part of our commitment to their success, 100 percent of non-bargaining employees receive annual performance reviews with semiannual check-ins on their progress.



myNRGRewards

In addition to our traditional benefits and incentives, we always look for ways to improve how we reward and recognize our employees. Since April 2013, the myNRGRewards program has recognized high-performance employees with points they can redeem online for prizes such as electronics, gift cards and cruises. In 2016, we enhanced the program to allow any employee to recognize their colleagues for a job well done. ✦

Waste management

We have a voluntary recycling/waste team at all our power generation facilities and/or Green Ambassadors (our internal employee green team) at all our office locations. Representatives review waste issues specific to their facility and share findings with their regional sustainability lead or the Green Ambassadors, who help share waste management best practices. For example, NRG in 2016 reduced waste by giving Houston office employees reusable tumblers and eliminating disposable paper cups at our Princeton headquarters, saving the company more than \$140,000 a year in the process.

In addition to our corporate offices, we're committed to reporting waste, recycling and effluent results annually for every generating facility. Each facility uses the waste, recycling and effluent information to ensure each component is managed properly. NRG facilities track waste and materials recycled in the NRG Environmental Management Information System.

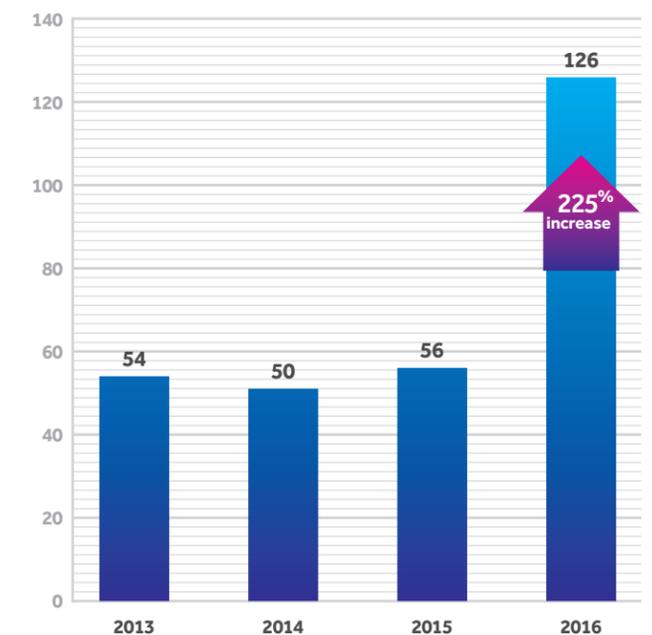
In 2016, our plants recycled 126 tons of electronic waste and our offices recycled 1,165 tons (23 percent) of municipal solid waste. Additionally, more than 5,000 tons of scrap metal were recycled. The increase in electronics recycling was driven by equipment upgrades at our large server stations and the removal of electronic equipment at facilities that were closed in 2016.

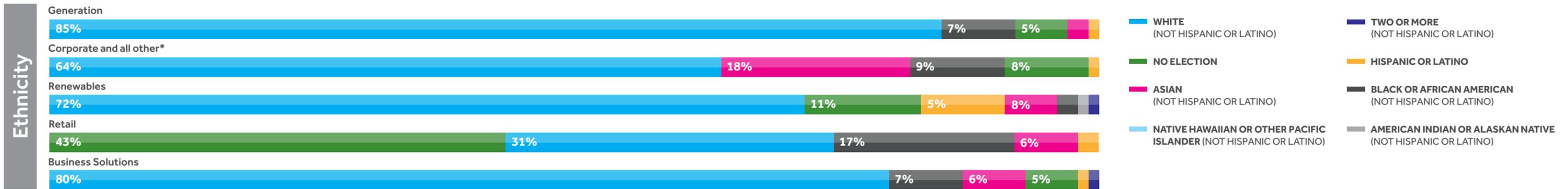
Recycling training

In late 2016, we offered office-based employees a short online training session that covered the importance of recycling, common recycling mistakes and NRG success stories. About half of all eligible employees completed the training, and at year's end, we opened up the session to everybody in the company.

In tandem with the online training, we launched a recycling campaign on the InspireMeNRG platform to promote actions from the session. The campaign was 2016's most successful, with participating employees taking 1,578 actions over 45 days. Those actions included keeping liquids out of the recycling bin, collecting plastic bags separately and sharing pictures of what they recycled at work. ✦

E-waste recycled (U.S. tons)





Workforce diversity

Diversity in talent, gender, ethnicity, sexual orientation, cultural perspectives and experiences is essential for us to achieve our goals. We aspire to create a culture that fosters inclusion, inspires innovation, encourages respect and promotes unlimited success for everyone as we create a sustainable energy future. We also recognize that the power-generation sector, including NRG, has a lot of room for improvement.

U.N. Women’s Empowerment Principles

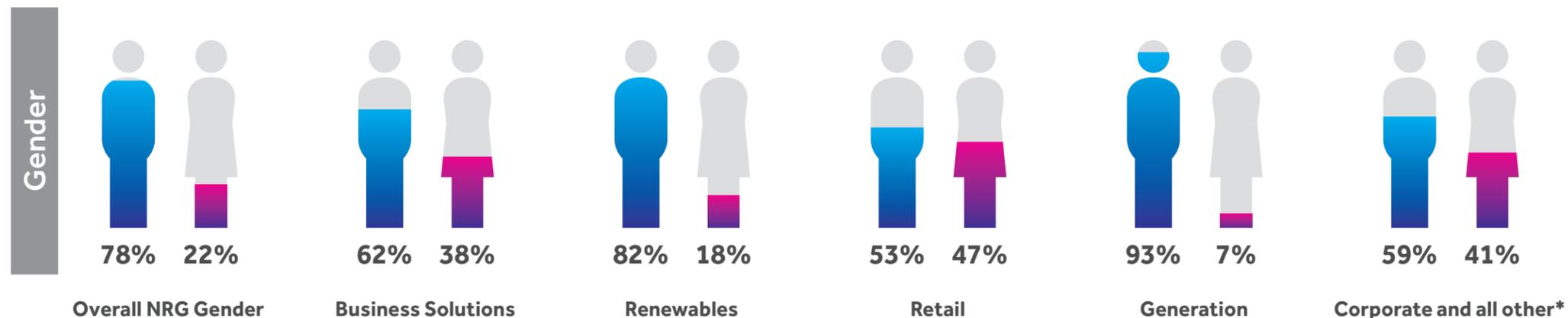
In 2016, we conducted a benchmarking study to assist us in identifying our strengths and opportunities regarding diversity and inclusion. The study analyzed quantitative and qualitative data across our employee lifecycle – from recruitment and selection to development and retention – and the results will inform our strategic diversity plan in 2017.

As part of that plan, NRG became the first U.S. power company to sign on to the **U.N. Women’s Empowerment Principles**:

1. Establish high-level corporate leadership for gender equality goals
2. Treat all women and men fairly at work; respect and support human rights and nondiscrimination
3. Ensure the health, safety and well-being of all women and men workers
4. Promote education, training and professional development for women
5. Implement enterprise development, supply chain and marketing practices that empower women
6. Promote equality through community initiatives and advocacy
7. Measure and publicly report on progress to achieve gender equality

“NRG is committed to taking real and measurable steps to becoming an industry leader when it comes to building a diverse and inclusive company. In partnering with Paradigm, NRG invested in understanding diversity and inclusion across the employee lifecycle, from how it attracts and hires talent to how it develops and retains its workforce. Through this partnership, NRG is taking steps to broaden the talent pipeline to yield a more diverse candidate pool, increase structure in people processes to continuously improve their objectivity in decision-making, build community for employees from underrepresented backgrounds, and communicate a commitment to D&I both internally and externally.”

– **Joelle Emerson**, CEO of Paradigm, which helped us develop our diversity benchmarking study



* Includes employees not in NRG Business, NRG Renew and NRG Home. As of Dec. 31, 2016.

Employee and recruitment resources

NRG employees have access to a number of groups and programs that provide support for diversity-related issues and initiatives:

- Women in Power offers mentoring opportunities for women in leadership positions to encourage more female participation in the male-dominated operations environment
- Diversity, Inc. is a leading benchmarking/consulting publication; our subscription allows us to access reports and best practices to use throughout the company
- Our membership in the CEB Corporate Leadership Council provides access to whitepapers and research from Fortune 500 companies on best practices in diversity and all HR competencies
- We subscribe to the Professional Diversity Network, an online platform including more than 30 diverse organizations that help us market our jobs to a variety of ethnic, gender, disabled and veteran-based audiences
- We engage nationally with many diverse organizations, including Recruit Military, IvyQ, NAACP, ProWomen, American Association of Blacks in Energy and the Black Data Processing Association; locally, our business groups often engage with technical schools and diverse organizations that support volunteering and recruiting needs
- Our job postings are automatically promoted on state workforce commission and veteran outplacement websites across the U.S. ✚

positiveNRG

PositiveNRG, our corporate philanthropy program, enriches the communities we serve by supporting initiatives that address education, human welfare, the environment, and health and wellness. Learn more about positiveNRG [here](#).

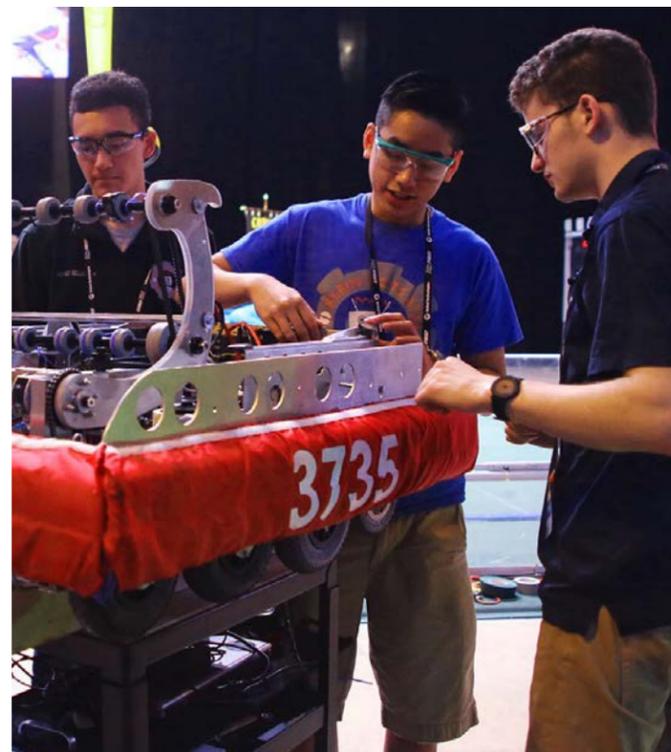
Partnerships

NRG supports organizations that empower young minds, aid in disaster relief and help protect ecosystems.

FIRST®

Investing in the next generation of leaders is important for any business that wants to ensure a productive and innovative future workforce. In a highly technical and rapidly changing industry, attracting and retaining top talent is especially crucial for NRG. That's why positiveNRG named *FIRST*® (For Inspiration and Recognition of Science and Technology) one of its flagship nonprofit organizations in 2016.

Through an NRG mentoring program, employees across the country work with middle and high school teams to design and build robots for regional *FIRST* competitions in hopes of qualifying for the *FIRST* Championship. Since 2013, employee mentorship has nearly doubled and our financial support has



nearly tripled. In 2016, seven NRG-sponsored teams qualified for the *FIRST* Championship in St. Louis.

Power2Serve

In March 2016, flooding from the Sabine River devastated the small town of Deweyville, Texas. Our 26-foot mobile Power2Serve® vehicle rolled in to support volunteer groups and provide power for emergency personnel and displaced residents. The Power2Serve program offered a climate-controlled pavilion where the nearly 1,200 residents could gather to charge electronics, get internet access and begin applying for federal aid.

After 29 days in Deweyville, the Power2Serve program trekked to Houston to serve volunteer crews and a new group of residents forced out of their homes by floodwaters. In August, when the American Red Cross declared the flood in southern Louisiana the worst U.S. natural disaster since Hurricane Sandy, our Power2Serve truck and team were on the scene to support the needs of the community and first responders.



2016 positiveNRG



Employee goodwill programs

We're proud of our employees who serve as outstanding leaders and ambassadors in the communities where we live and work. NRG employees from our offices and power plants across the country dedicate time, expertise and financial support to help those in need. NRG initiatives include community projects and events we sponsor. To encourage and reinforce participation in our positiveNRG program, NRG supports a variety of goodwill programs year-round. Read more about these opportunities [here](#).

NRG Gives + Reliant Gives

In 2016, we launched two crowd-sourced charitable giving programs: NRG Gives and Reliant Gives. Employees nominated nonprofits, narrowed the list

of potential recipients down to three, and the public at large voted for the organizations to receive up to a \$100,000 donation. In total, the programs received more than one million public votes, and the NRG Retail Charitable Foundation donated \$460,000 to nine charities in the communities that Reliant and NRG serve.

positiveNRG Week

For the ninth straight year, NRG employees spent a week making a positive impact in their communities. During positiveNRG Week in 2016, more than 1,200 employees in 18 states volunteered nearly 5,000 hours with more than 200 nonprofit organizations, and positiveNRG donated nearly \$100,000 to charitable causes.

Global outreach

In addition to our domestic efforts in 2016, NRG employees traveled the globe and volunteered more than 300 hours. Their efforts in the United Kingdom, Uruguay, Morocco, Honduras and Haiti earned more than \$3,000 in matching dollars from NRG. ✦



Feedback

If you have any comments or questions about this report, or would like more information on our sustainability efforts, please visit nrg.com or email sustainability@nrg.com.

Forward-looking statements

In addition to historical information, the information presented in this report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act. These statements involve estimates, expectations, projections, goals, assumptions, known and unknown risks and uncertainties and can typically be identified by terminology such as "may," "should," "could," "objective," "projection," "forecast," "goal," "guidance," "outlook," "expect," "intend," "seek," "plan," "think," "anticipate," "estimate," "predict," "target," "potential" or "continue," or the negative of these terms or other comparable terminology. Such forward-looking statements include, but are not limited to, statements about the Company's future revenues, income, indebtedness, capital structure, plans, expectations, objectives, projected financial performance and/or business results and other future events, and views of economic and market conditions. Although NRG believes that its expectations are reasonable, it can give no assurance that these expectations will prove to be correct, and actual results may vary materially. Factors that could cause actual results to differ materially from those contemplated herein include, among others, general economic conditions, hazards customary in the power industry, weather conditions, including wind and solar performance, competition in wholesale power markets, the volatility of energy and fuel prices, failure of customers to perform under contracts, changes in the wholesale power markets, changes in government regulation of markets and of environmental emissions, the condition of capital markets generally, our ability to access capital markets, unanticipated outages at our generation facilities, adverse results in current and future litigation, failure to identify, execute or successfully implement acquisitions, repowerings or asset sales, our ability to implement value enhancing improvements to plant operations and companywide processes, our ability to proceed with projects under development or the inability to complete the construction of such projects on schedule or within

budget, risks related to project siting, financing, construction, permitting, government approvals and the negotiation of project development agreements, our ability to progress development pipeline projects, GenOn's ability to continue as a going concern, our ability to obtain federal loan guarantees, the inability to maintain or create successful partnering relationships with NRG Yield and other third parties, our ability to operate our businesses efficiently including NRG Yield, our ability to retain retail customers, our ability to realize value through our commercial operations strategy and the creation of NRG Yield, the ability to successfully integrate the businesses of acquired companies, the ability to realize anticipated benefits of acquisitions (including expected cost savings and other synergies) and the ability to sell assets to NRG Yield, Inc. or the risk that anticipated benefits may take longer to realize than expected, and our ability to execute our Capital Allocation Plan. Debt and share repurchases may be made from time to time subject to market conditions and other factors, including as permitted by United States securities laws. Furthermore, any common stock dividend is subject to available capital and market conditions. NRG undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in NRG's 2016 Annual Report on Form 10-K and the Company's other filings with the Securities and Exchange Commission (SEC) available at sec.gov.

APPENDIX A

Reg G: Reconciliation of Adjusted EBITDA from low-carbon sources

	2014	2015	2016
Net loss	(183)	(150)	(414)
Interest expense, net	219	226	247
Income tax	-	(18)	(20)
Depreciation, amortization and ARO	300	379	391
Amortization of contracts	23	47	62
Adjustment to reflect NRG share of adjusted EBITDA	29	50	106
Other non-recurring costs	(3)	5	3
Asset write-offs and impairments	34	22	352
MtM losses/(gains)	(6)	5	6
Adjusted EBITDA	412	566	734

EBITDA and Adjusted EBITDA are non-GAAP financial measures. These measurements are not recognized in accordance with GAAP and should not be viewed as an alternative to GAAP measures of performance. The presentation of Adjusted EBITDA should not be construed as an inference that NRG's future results will be unaffected by unusual or non-recurring items.

EBITDA represents net income before interest (including loss on debt extinguishment), taxes, depreciation and amortization. EBITDA is presented because NRG considers it an important supplemental measure of its performance and believes debt-holders frequently use EBITDA to analyze operating performance and debt service capacity. EBITDA has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our operating results as reported under GAAP. Some of these limitations are:

- EBITDA does not reflect cash expenditures, or future requirements for capital expenditures, or contractual commitments;
- EBITDA does not reflect changes in, or cash requirements for, working capital needs;
- EBITDA does not reflect the significant interest expense, or the cash requirements necessary to service interest or principal payments, on debt or cash income tax payments;
- Although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future, and EBITDA does not reflect any cash requirements for such replacements; and
- Other companies in this industry may calculate EBITDA differently than NRG does, limiting its usefulness as a comparative measure.

Because of these limitations, EBITDA should not be considered as a measure of discretionary cash available to use to invest in the growth of NRG's business. NRG compensates for these limitations by relying primarily on our GAAP results and using EBITDA and Adjusted EBITDA only supplementally.

Adjusted EBITDA is presented as a further supplemental measure of operating performance. As NRG defines it, Adjusted EBITDA represents EBITDA excluding impairment losses, gains or losses on sales, dispositions or retirements of assets, any mark-to-market gains or losses from accounting for derivatives, adjustments to exclude the Adjusted EBITDA related to the non-controlling interest, gains or losses on the repurchase, modification or extinguishment of debt, the impact of restructuring and any extraordinary, unusual or non-recurring items plus adjustments to reflect the Adjusted EBITDA from our unconsolidated investments. The reader is encouraged to evaluate each adjustment and the reasons NRG considers it appropriate for supplemental analysis. As an analytical tool, Adjusted EBITDA is subject to all of the limitations applicable to EBITDA. In addition, in evaluating Adjusted EBITDA, the reader should be aware that in the future NRG may incur expenses similar to the adjustments in this report.

Management believes Adjusted EBITDA is useful to investors and other users of NRG's financial statements in evaluating its operating performance because it provides an additional tool to compare business performance across companies and across periods and adjusts for items that we do not consider indicative of NRG's future operating performance. This measure is widely used by debt-holders to analyze operating performance and debt service capacity and by equity investors to measure our operating performance without regard to items such as interest expense, taxes, depreciation and amortization, which can vary substantially from company to company depending upon accounting methods and book value of assets, capital structure and the method by which assets were acquired. Management uses Adjusted EBITDA as a measure of operating performance to assist in comparing performance from period to period on a consistent basis and to readily view operating trends, as a measure for planning and forecasting overall expectations, and for evaluating actual results against such expectations, and in communications with NRG's Board of Directors, shareholders, creditors, analysts and investors concerning its financial performance. ✚



APPENDIX B

Sustainability Accounting Standards Board Report

NRG supports transparency in reporting that contributes directly to generating comparable and consistent data within an industry. The Sustainability Accounting Standards Board (SASB) has developed sustainability metrics for public companies to provide information via their annual reports on Form 10-K filed with the SEC. For purposes of information, we have identified below key comparable data against which we are able to report in our sustainability report. The nature of our business directs us to consult the SASB provisional Standards for the Infrastructure Sector – Electric Utilities. NRG is not a regulated utility thus, the Activity Metrics are not relevant. For more details on our report process please visit *Reporting* in the 2016 Sustainability Report.

SASB code	Accounting metric	2016
Greenhouse gas emissions and energy resource planning		
IF0101-01	(1) Gross global scope 1 emissions (million metric tons)	69,000,000* *Rounded to nearest million. Includes 80% ownership of 144MW capacity natural gas plant in Turkey and 37.5% of a 605MW capacity coal plant in Australia.
	(2) Percentage covered under emissions-limiting regulations, and	18%
	(3) Percentage covered under emissions-reporting regulations	99.99%
	Clarification of percentage covered under emissions-limiting and emissions-reporting regulations: A significant majority (>99%) of NRG’s emission sources are subject to mandatory federal (USEPA) greenhouse gas reporting regulations. In addition, some of these emission sources (18% specified under IF0101-01(2) above) also reported to regional and state CO ₂ (-e) reporting programs that are disclosed annually as part of NRG’s financial reporting data (RGGI, AB32).	
	Discussion of accounting, estimations and uncertainty for scope 1 emissions: Scope 1 includes only direct GHG emissions associated with fuel combustion in boilers, turbines and engines used for the production of wholesale electric. The Scope 1 GHG emissions were determined by using methods specified within Title 40, Chapter I, Subchapter C, Part 98, Subparts A, C and D of the Code of Federal Regulations. The determination of the equity share of GHG emissions is consistent with power equity share methodologies for equity share accounting for greenhouse gas emissions as described in GHG Protocol: A Corporate Accounting and Reporting Standard, Revised Edition. GHG emissions from combustion of fossil fuels used for other activities or equipment, such as auxiliary boilers, starter engines, mobile sources and offices is not included and was estimated to represent under 0.25% of the reported Scope 1 emissions. The Scope 1 emissions do not include emissions from fugitive sources such as hydro fluorocarbon releases from use of refrigeration and/or air conditioning equipment, sulfur hexafluoride (SF6) from electrical equipment and methane releases from natural gas transport.	
IF0101-02	Description of long-term and short-term strategy or plan to manage scope 1 emissions, emission-reduction targets, and an analysis of performance v. those targets	NRG anticipates reductions in its future emissions profile as the company modernizes the fleet through repowering, improves generation efficiencies, and explores methods to capture CO ₂ . From 2015 to 2016, the company’s CO ₂ e emissions decreased from 86 million metric tons to approximately 66 million metric tons, representing a 23% reduction year over year. Factors leading to the decreased emissions include reductions in fleetwide annual net generation due to an overall decrease in market demand and a market-driven shift towards increased generation from natural gas over coal. NRG’s goal is to reduce its total U.S. Scope 1, 2 (purchased electricity) and 3 (business travel) CO ₂ e emissions by 50% by 2030, and 90% by 2050, using 2014 as a baseline.

SASB code	Accounting metric	2016			
Air quality					
IF0101-04	Air emissions source	Air emissions (metric tons) Percentage from production facilities within urbanized areas			
	NOx	39,100 31%			
	SOx	98,700 41%			
	PM10	4,301 40%			
	Pb	.98 25%			
	Hg	.27 9%			
	Discussion of accounting, estimations and uncertainty for air emissions: The requirement to report PM-10 emissions in annual emissions inventories or emissions statements varies between states. In addition, the earliest reporting deadline for a reporting year is April 1st of the following year. For sites in NRG's fleet that have not yet reported or are not required to report, PM-10 emissions at the time of submittal to SASB, NRG has used USEPA's AP-42 emission factors to estimate emissions.				
Water management					
IF0101-05	(1) Total water withdrawn (thousands of cubic meters)	8,173,090			
		2016 NRG water withdraw by source			
		Water source	Total (thousands of cubic meters)	Percent	
		Fresh water	3,671,497	45%	
		Non-fresh water	3,310,813	40%	
		Ocean	1,190,781	15%	
		Total	8,173,090	100%	
	(2) Total water consumed, (thousands of cubic meters)	201,554			
	Percentage of each in regions with high or extremely high baseline water stress	Baseline water stress high (40-80%) extremely high (>80%)	Withdrawal from areas with high or extremely high baseline water stress	Consumption from areas with high or extremely high baseline water stress	
		Percent of total water	27%	41%	
		Percent that is non-fresh*	24%	61%	
		*Non-Fresh water has a total dissolved solids great than 1000 mg/l and is not used for agriculture or municipal water supply. NRG uses the World Resource Institute Aqueduct and the World Wildlife Federation Water Risk Tool to model and help assess water basin risks in combination with regional internal subject matter expertise. NRG models 135 generating locations, which are fossil fuel, renewable, nuclear and thermal facilities. The World Resource Institute Aqueduct tool identifies 67 facilities located in high (40-80%) or extremely high (>80%) baseline water stress.			
		Type of generating facility in baseline water stress area			Number
Fossil fuel (natural gas, coal, oil)			30		
Renewable (solar and wind)			28		
Nuclear			1		
Thermal (district heating and cooling)			8		
Total			67		

SASB code	Accounting metric	2016					
Water management (continued)							
IF0101-06	Number of incidents of non-compliance with water-quality and/or quantity permits, standards and regulations	<p>15</p> <p>In accordance with the federal Clean Water Act, we obtain all required permits and report results of water discharges to state agencies monthly. We have 77 wastewater discharge permits and ran more than 100,000 tests in 2016 of which 15 exceedances were found and promptly re-recorded. Exceedance information is entered in our incident management system, which notifies NRG operations management so we can identify the root cause and implement corrective and preventive actions. In 2016, we created a water issue task force to evaluate instances of water permit noncompliance, review corrective and preventive actions and share best practices to prevent recurrence.</p>					
IF0101-07	<p>Discussion of water management risks:</p> <p>NRG's definition of substantive risk from water is the possibility that an event will occur and significantly affect the achievement of NRG's business goals. The risk identification and assessment process applies to both direct operations and the supply chain. NRG uses the measures, metrics and indicators for water risk assessment, leveraging the management and professional judgment from the following perspectives:</p> <ul style="list-style-type: none"> • Financial impact <ul style="list-style-type: none"> ◦ Corporate earnings ◦ Capital expenditure on technologies to reduce water consumption and withdrawal • Plant operation <ul style="list-style-type: none"> ◦ Operation disruption due to water shortage ◦ Increase in costs of water usage ◦ Supply chain risk • Environmental impact <ul style="list-style-type: none"> ◦ Water availability ◦ Water quality of river basins ◦ Regulations that impact supply and/or management of water 						
	<p>Discussion of strategies and practices to mitigate risks:</p> <p>Water risk is monitored by the risk owners (individual plant operators) and reported to management upon material changes with a reporting threshold of 20% in water consumption and withdrawal levels. If it is determined that a water supply risk exists that could impact projected generation levels within any plant within the subsequent two year time frame, risk mitigation efforts are identified and economically evaluated for implementation. Water risk regarding the impact for barge delivery is evaluated on a daily basis, with contingency plans developed as needed. NRG has long-term water contracts and agreements which mitigate risk. NRG SVP, Plant Operations reviews modelling scenarios generated for water risk determination. Plant level NRG Water usage analysis is reviewed annually. NRG water usage analysis is reviewed by the management of NRG Operations, Engineering and Commercial Operations.</p>						
Coal ash management							
IF0101-08	Amount of coal combustion residuals generated (metric tons)	2,708,989					
	Percentage recycled (metric tons)	60%					
IF0101-09	Total number of coal combustion residuals impoundments	28 surface impoundments as defined by 40 CFR 257.2.					
	Number by EPA hazard potential classification, broken down by EPA structural integrity assessment	NRG impoundment structural integrity rating and hazard potential classification					
			Less than low	Low	Significant	High	Incised**
		Satisfactory	0	6	5	0	0
		Fair	0	0	0	0	0
		Poor	0	0	0	0	0
		Unsatisfactory	0	0	0	0	0
Not applicable	0	10	2	0	4		
<p>*Powerton Former Ash Basin will be evaluated by April 17, 2018 as required by the CCR regulation which is not in scope of this report. Thus, it is not included in the table.</p> <p>**Incised is an impoundment, but not subject to assessment due to the fact they do not have a dam.</p> <p>To align with EPA reporting, we have added a column for 'Incised' and a row 'Not Applicable' to account for all impoundments as defined by the EPA.</p>							

SASB code	Accounting metric	2016		
Workforce health and safety				
IF0101-12	(1) Total recordable injury rate	0.62		
	(2) Fatality rate	0		
	(3) Near miss frequency rate	44.74 Process for classifying, recording and reporting: <i># of near misses reported / total hours worked X 1,000,000 = near miss frequency rate</i> The National Safety Agency defined near misses as "an unplanned event that did not result in injury, illness, or damage, but had the potential to do so." The number of near misses was derived from a report pulled from Intelex, NRG's incident reporting system. NRG's OHS management system applies to 100% of US operations. NRG utilizes an electronic Incident Management System (Intelex) to document, communicate, track, and trend specific factors about each event including causal factors and corrective actions; this system provides automated fleet-wide notifications. The system also includes notifications to executive management when significant safety events occur that meet the defined criteria for a Significant Event notification. The system also generates weekly reports to communicate the previous weeks' event to NRG personnel.		
Nuclear safety and emergency management				
IF0101-15	Total number of nuclear power units, broken down by nuclear regulatory commission action matrix column	NRG South Texas LP is a 44% owner of a joint, undivided interest in South Texas Project (STP), the other owners of STP being the City of Austin, Texas (16%) and the City Public Service Board of San Antonio (40%). STP Nuclear Operating Company, or STPNOC, was founded by the then-owners in 1997 to operate the plant, and it is the operator licensee and holder of the Facility Operating Licenses NPF-76 and NPF-80. STPNOC is a nonstock, nonprofit, nonmember corporation. Each owner of STP appoints a board member (and the three directors then choose a fourth director who also serves as the chief executive officer of STPNOC). A participation agreement establishes an owners' committee with voting interests consistent with ownership interests.		
		Reactor unit	Action matrix column	Current regulatory oversight
		South Texas 1	Regulatory response South Texas Project 1 is in Column 2 because of a greater-than-green inspection finding in the Security Cornerstone originating in 4Q2016	Baseline inspection and IP 95001 supplemental inspection
		South Texas 2	Regulatory response South Texas Project 2 is in Column 2 because of a greater-than-green inspection finding in the Security Cornerstone originating in 4Q2016	Baseline inspection and IP 95001 supplemental inspection
Table source: https://www.nrc.gov/reactors/operating/oversight/actionmatrix-summary.html#r_4				
IF0101-16	Discussion of efforts to manage nuclear safety and emergency preparedness	As a holder of an ownership interest in STP, NRG South Texas LP is an NRC licensee and is subject to NRC regulation. The NRC license gives NRG the right only to possess an interest in STP but not to operate it. As a possession-only licensee, i.e., non-operating co-owner, the NRC's regulation of NRG South Texas LP is primarily focused on NRG's ability to meet its financial and decommissioning funding assurance obligations. In connection with the NRC license, NRG and its subsidiaries have a support agreement to provide up to \$120 million to support operations at STP.		

SASB code	Accounting metric	2016
Nuclear safety and emergency management (continued)		
<p>Decommissioning Trusts — Upon expiration of the operating licenses for the two generating units at STP, currently scheduled for 2027 and 2028, the co-owners of STP are required under federal law to decontaminate and decommission the STP facility. Under NRC regulations, a power reactor licensee generally must pre-fund the full amount of its estimated NRC decommissioning obligations unless it is a rate-regulated utility, or a state or municipal entity that sets its own rates, or has the benefit of a state-mandated non-bypassable charge available to periodically fund the decommissioning trust such that the trust, plus allowable earnings, will equal the estimated decommissioning obligations by the time the decommissioning is expected to begin.</p> <p>NRG South Texas LP, through its 44% ownership interest, is the beneficiary of decommissioning trusts that have been established to provide funding for decontamination and decommissioning of STP. CenterPoint and AEP collect, through rates or other authorized charges to their electric utility customers, amounts designated for funding NRG South Texas LP's portion of the decommissioning of the facility.</p> <p>In the event that the funds from the trusts are ultimately determined to be inadequate to decommission the STP facilities, the original owners of the Company's STP interests, CenterPoint and AEP, each will be required to collect, through their PUCT-authorized non-bypassable rates or other charges to customers, additional amounts required to fund NRG South Texas LP's obligations relating to the decommissioning of the facility. Following the completion of the decommissioning, if surplus funds remain in the decommissioning trusts, those excesses will be refunded to the respective rate payers of CenterPoint or AEP, or their successors.</p> <p>For more information please see NRG's 2016 10-K SEC filing.</p>		
Management of the legal and regulatory environment		
IF0101-21	<p>Discussion of positions on the regulatory and political environment related to environmental and social factors and description of efforts to manage risks and opportunities presented</p>	<p>A discussion of risks can be found in NRG's 2016 10-K SEC filing, Item 1-A, Risk Factors Related to NRG Energy, Inc.</p> <p>Regulatory filings, white papers, presentations, and other materials that NRG has prepared and submitted setting forth NRG's positions on a variety of critical subjects driving our business and the industry can found at http://www.nrg.com/company/energy-policy/.</p>