Welcome to your CDP Climate Change Questionnaire 2021

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

NRG Energy, Inc., or NRG or the Company, is an integrated power company built on dynamic retail brands with diverse generation assets. NRG brings the power of energy to customers by producing and selling electricity and related products and services in major competitive power markets in the U.S. and Canada in a manner that delivers value to all of NRG's stakeholders. NRG is a customer-driven business focused on perfecting the integrated model by balancing retail load with generation supply within its deregulated markets. NRG sells energy, services, and innovative, sustainable products and services directly to retail customers under the brand names NRG, Reliant, Green Mountain Energy, Stream, and XOOM Energy, as well as other brand names owned by NRG, supported by approximately 23,000 MW of generation as of December 31, 2020. NRG was incorporated as a Delaware corporation on May 29, 1992. Certain matters discussed in this survey are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that are subject to risks and uncertainties. Please see statement below about forward-looking statements.

SAFE HARBOR: 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, 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 regulations, the condition of capital markets generally, our ability to access capital markets, cyberterrorism and inadequate cybersecurity, 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 implement and execute on our publicly announced transformation plan, including any cost savings and margin enhancement, our ability to achieve our net debt targets, our ability to proceed with projects under development or the inability to complete the construction of such projects on schedule or within budget, the inability to maintain or create successful partnering relationships, our ability to operate our businesses efficiently, our ability to retain retail customers, our ability to realize value through our commercial operations strategy, the ability to successfully integrate businesses of acquired companies, our ability to realize anticipated benefits of transactions (including expected cost savings and other synergies) or the risk that anticipated benefits may take longer to realize than expected, and our ability to execute our Capital Allocation Plan.

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. The foregoing review of factors that could cause NRG's actual results to differ materially from those contemplated in the forward-looking statements included in this report should be considered in connection with information regarding risks and uncertainties that may affect NRG's future results included in NRG's filings with the Securities and Exchange Commission at www.sec.gov.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Australia
Canada
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Equity share

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Other divisions

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	NRG's President and CEO has overall responsibility for the company's climate change-related issues and management. NRG's vision is to create a sustainable energy future, therefore these issues are being managed by the President and CEO. The CEO reviews all sustainability strategy, goals and targets, which are then reviewed and approved by the Company's Governance and Nominating Committee and the Board of Directors. The CEO is directly involved with creating and approving NRG's emissions reductions goals. In 2019, the CEO made the decision to accelerate NRG's emissions reduction goals to be in line with a 1.5 Celsius degree trajectory and in 2020 that goal was certified by the Science Based Targets initiative.

Board-level committee	Since 2016, NRG's Board of Director's Governance and Nominating Committee officially oversees corporate sustainability. The rationale for formalizing board oversight of climate-related issues is because the board is ultimately responsible for all potential risks to the company. 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. In 2019, the board reviewed and approved NRG's accelerated emissions reductions goal to have 50% decrease by 2025 and net-zero by 2050. Committee composition can be found at: http://investors.nrg.com/phoenix.zhtml?c=121544&p=irol-govcommcomp.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Monitoring implementation and performance of objectives Overseeing major capital	Since 2016, our board's Governance and Nominating (G&N) Committee officially oversees corporate sustainability. 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. As of 2018, Sustainability became an annual agenda item at the full Board meeting and is reviewed separately by the G&N Committee, in addition to be part of general review of projects and transactions. The Board has responsibility for overall risk oversight of NRG which includes understanding the material risks of the business and what steps management is taking or should be taking to manage those risks, as well as understanding and determining the appropriate risk appetite for the company. To define NRG's risk appetite, the Board reviews and approves the annual business plan, budget and long-term plan, strategic initiatives, acquisitions and divestitures, and capital allocation plan. Climate-related issues are considered to the extent they are material. For example, the Board may incorporate climate-related issues into relevant strategic decisions, particularly those related to

	expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	physical generating assets and customer preferences. Learn more about committee composition at http://investors.nrg.com/phoenix.zhtml?c=121544&p=irol-govcommcomp. The head of Sustainability presents key strategic priorities to the full Board during scheduled meetings throughout the fiscal year. For example, NRG's science-based targets are monitored and proposals to make significant changes to the goals are presented to the Board for approval.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The head of Sustainability reports to the SVP, Corporate Affairs and Chief Compliance Officer, who then reports to the Chief Executive Officer. The position of head of Sustainability was formalized in 2013 as the strategic importance of sustainability was recognized and the need for that to be integrated across the business.

The head of Sustainability leads all implementation and is responsible for the development of NRG's climate change policy positions and coordination between policy and commercial initiatives. This includes drafting and publishing NRG's Climate Change Principles and engaging with investors on integrating ESG factors into reporting practices as well as advising on business-to-business renewable energy solution proposals. The head of Sustainability is responsible for executing on NRG's certified science-based targets to reduce absolute emissions 50% by 2025 and 90% by 2050 and monitoring megatrends in the power sector and relating that information to business units.

Climate-related issues are monitored on an ongoing basis through conversations with NRG's risk, regulatory affairs, legal, retail and operations departments.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Other, please specify All Plant Operations employees, including the Management Group	Monetary reward	Efficiency project	Compensation of NRG's power plant personnel is, in part, based on environmental key performance indicator (EKPI) scores. Factors that affect the EKPI are performance, environmental reporting and the econrg projects that can reduce GHGs in the community or plant. The EKPI score take into account the accuracy of continuous emissions monitoring systems (CEMS) and whether a plant has complied with regulatory requirements such as the EPA's Mandatory Greenhouse Gas Reporting Rule (40 CFR Part 98).
Executive officer	Monetary reward	Company performance against a climate-related sustainability index	The metric for sustainability is part of a more comprehensive metric included in executive compensation. The metric also includes other key pillars of NRG's values including safety and community engagement. As described in NRG's 2020 Proxy Statement (https://investors.nrg.com/static-files/e724b95c-7ae7-478c-92bd-a1c4478d27fc), the Compensation Committee of NRG's Board designs and implements an executive compensation program that complements and advances NRG's Power Values, which are an integral part of our company culture. One of our Power Values is safety and well-being, and part of this objective includes expanding our sustainable workplace initiatives, which include climate initiatives (please see pages 46 and 49 of Proxy Statement). For Named Executive Officers (NEOs) which include the CEO, CFO, and the leaders of our major businesses, annual incentive compensation is

			based on a number of financial performance metrics as well as achievement of certain company goals. During 2020, such company goals included creating a company culture that promotes and fulfils our Power Values. NRG's Board Compensation Committee assessed the performance of each NEO relative to meeting our Power Values and was able to adjust his / her annual incentive plan compensation by a modifier of +/- 20% (please see pages 52-53 of Proxy Statement).

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Time horizons are subject to change.
Medium-term	1	3	Time horizons are subject to change.
Long-term	3	10	Time horizons are subject to change.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

NRG defines substantive financial or strategic impact on the business as a significant event, that at a corporate level, NRG's businesses are adversely affected and may impact NRG's results of operations, financial condition and cash flows. The definition for substantive may affect different businesses at different levels of impact. For example, NRG operates power plants that provide an essential service to customers and any risk of disrupting that service would be substantive. For example, hazards customary to the power production industry include the potential for unusual weather conditions, which could affect fuel pricing and availability, NRG's route to market or access to customers, i.e., transmission and distribution lines, or critical plant assets. The contribution of climate change to the frequency or intensity of weather-related events could affect NRG's operations and planning process. Climate change could also affect the availability of a secure and economical supply of water in some locations,

which is essential for the continued operation of NRG's generation plants. NRG monitors water risk carefully. If it is determined that a water supply risk exists that could impact projected generation levels at any plant risk mitigation efforts are identified and evaluated for implementation. Also, demand for NRG's energy-related services could be similarly impacted by consumers' preferences or market factors favoring energy efficiency, low-carbon power sources or reduced electricity usage.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Climate-related issues are integrated in multi-disciplinary company-wide risk identification, assessment and management processes.

At the company level, NRG evaluates risks such as: regulatory, commercial, financial, and physical risks and opportunities associated with climate change and the different impacts on NRG's wholesale and retail businesses. The SVP and General Counsel, heads of Environment, Government Affairs and Regulatory Affairs team are responsible for assessing and managing regulatory risks and opportunities at federal, regional and local agencies. NRG's President and CEO reports to the Board of Directors on any material risks. NRG's SVP, Operations and SVP Environmental are responsible for identifying and managing environmental risks to operations. NRG's CRO reports to the CFO and monitors commercial risks to domestic revenues from commodity and electric power availability or pricing, carbon and emission trading, and renewable energy credits. The EVP, Retail and SVP of Business Solutions identify commercial opportunities and risks to all of NRG's retail businesses. Risks are further discussed in Item 1A in the 2020 NRG 10-K. NRG calculates annual greenhouse gas emission inventories. Monitoring of risks and opportunities occurs on an ongoing basis by NRG's Financial Risk Management Committee. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee

meets quarterly to review existing risks and approve mitigation initiatives. NRG's executive team communicates risks and mitigation efforts to NRG's board of directors quarterly. Externally, NRG reports material risks to investors and stakeholders through quarterly earnings calls, quarterly SEC filings, the CDP questionnaires and annual sustainability reporting.

The Enterprise Risk Management process enables management to manage uncertainty to enhance or preserve enterprise value and facilitates the functional group's management of risk. NRG's strategy addresses long and short term risks and opportunities and aims to reduce the company's own GHG risks and those of its customers. For example, some of the business platforms to achieve this vision include adding clean energy solutions for our residential and business customers, which will save money, increase reliability and resiliency, and improve their own carbon footprints.

At the asset level, for our wholesale generation assets, Asset Management and other relevant groups are responsible for identifying risks and opportunities and directly report these risks to the CEO. Commercial Operations and Risk groups help by conducting sensitivity analyses to assess exposure from weather and other risks. Climate change risks to retail subsidiaries are assessed by the respective subsidiary Heads of Business. Risks are monitored by the management teams of our retail subsidiaries and managed by NRG's Financial Risk Management Committee.

Since 2016, our board's Governance and Nominating (G&N) Committee officially oversees corporate sustainability. 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. As of 2018, Sustainability became an annual agenda item at the full Board meeting and is reviewed separately by the G&N Committee, in addition to be part of general review of projects and transactions. The head of Sustainability presents key strategic priorities to the full Board during scheduled meetings throughout the fiscal year. For example, NRG's science-based targets are monitored and proposals to make significant changes to the goals are presented to the Board for approval.

The Board has responsibility for overall risk oversight of NRG which includes understanding the material risks of the business and what steps management is taking or should be taking to manage those risks, as well as understanding and determining the appropriate risk appetite for the company. To define NRG's risk appetite, the Board reviews and approves the annual business plan, budget and long-term plan, strategic initiatives, acquisitions and divestitures, and capital allocation plan. Climate-related issues are considered to the extent they are material. For example, the Board may incorporate climate-related issues into relevant strategic decisions, particularly those related to physical generating assets and customer preferences. Such engagement ensures that NRG is well-informed on climate science, decarbonization technologies and pathways, and policy and regulatory developments and therefore well-positioned both to mitigate climate risks and pursue climate opportunities.

TRANSITION RISKS
Transitional risks like federal regulations related to carbon pricing may present a risk to NRG. NRG's fleet of utility-scale power plants is heavily regulated by federal regulators. Most of NRG's power plants sell their output into regional electricity markets under rules set by the Federal Energy Regulatory Commission. While some regional energy markets address sustainability needs by putting a price on carbon, such as AB 32 in California or the Regional Greenhouse Gas Initiative in the Eastern United States, many struggle to price environmental externalities into the wholesale price of electricity. NRG has a business unit called Regulatory Affairs whose responsibility it is to assess different impacts on the market specific to NRG's wholesale business. NRG is engaged with stakeholders in reviewing innovative market designs that price carbon or allow for the procurement of low-carbon power, as part of a competitive process. Senior NRG executives have presented and testified on key issues related to transitional risks such as the Department of Energy Grid Reliability and Resilience Proposal. This ensures that NRG 's position on certain regulations is heard and considered in potential regulatory environments, and if successful, creates new innovative market designs

PHYSICAL RISKS
Extreme weather events may present a risk to power generating assets located in vulnerable geographical regions like Texas. Due to past events like Hurricane Harvey, NRG made improvements to some power plants like Cottonwood. Cottonwood generating station was damaged when the Sabine River Authority opened the floodgates of the Toledo Bend reservoir, which resulted in downstream flooding of the Sabine River. NRG's business continuity plan ensured that essential employees remain at their stations to manage the plant through the weather event. Plant personnel worked on the issues until the generating station was returned to service during the fourth quarter of 2017. A retaining wall was also built near the plant to protect against future flooding. As a result, this wall will protect again future flooding and resulting disruptions in operations.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current regulation is always considered in assessments by the Financial Risk Management Committee. Monitoring of current regulatory risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. The SVP and

		General Counsel, heads of Environment, Government Affairs and Regulatory Affairs Teams are responsible for assessing regulatory risks and opportunities at federal, regional and local agencies. NRG operates in different regions in the United States as well as Canada and are subject to regulations. Policies at the national, regional and state levels to regulate GHG emissions, as well as mitigate climate change, could adversely impact NRG's results of operations, financial condition and cash flows. One risk to the business from current regulation is increased costs associated with operating in regions that have a cap and trade system for carbon dioxide. For example, NRG operates generating units in Connecticut, Delaware, Maryland, and New York that are subject to the Regional Greenhouse Gas Initiative, RGGI, which is a regional cap and trade system. Intangible assets include RGGI emission credits which NRG began purchasing in 2009. These emission allowances are held-for-use and are amortized to cost of operations, with RGGI credits amortized based on units of production. Similarly, California has a CO2 cap and trade program for electric generating units greater than 25 MW. The impact on NRG depends on the cost of the allowances and the ability to pass these costs through to customers. Current regulation like this is included in risk assessments because it may impact revenue in areas where where NRG has power generating operations. The risk assessment process includes potential ranges of costs to participate in these power generation markets.
Emerging regulation	Relevant, always included	Emerging regulation is always considered in assessments by the Financial Risk Management Committee. Monitoring of potential regulatory risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. The SVP and General Counsel, Heads of Environment, Government Affairs and Regulatory Affairs team are responsible for assessing regulatory risks and opportunities at federal, regional and local agencies. GHG regulation could increase the cost of electricity generated by fossil fuels, and such increases could reduce demand for the power NRG generates and markets. Additionally, government regulations providing incentives for renewable generation could change at any time and such changes may adversely

		impact NRG's business, revenues, margins, results of operations and cash flows. For example, On September 29, 2017, the Department of Energy issued a proposed rulemaking titled the "Grid Resiliency Pricing Rule." The rulemaking proposed that FERC take action to reform the ISO/RTO markets to value certain reliability and resiliency attributes of electric generation resources. On October 23, 2017, NRG filed comments encouraging FERC to act expeditiously to modernize energy and capacity markets in a manner compatible with robust competitive markets. Emerging regulation is included in risk assessments because it may impact revenue in geographies with power markets (i.e CAISO, ERCOT, ISO-NE, NYISO, PJM) where NRG has operations.
Technology	Relevant, always included	Technology is always considered in assessments by the Financial Risk Management Committee. Monitoring of technology risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. Changes in technology may impair the value of NRG's power plants and the attractiveness of its retail products. Research and development activities are ongoing to provide alternative and more efficient technologies to produce power, including wind, photovoltaic (solar) cells, energy storage, and improvements in traditional technologies and equipment, such as more efficient gas turbines. Advances in these or other technologies could reduce the costs of power production to a level below what NRG has currently forecasted, which could adversely affect its cash flows, results of operations or competitive position. Technology, including distributed technology or changes in retail rate structures, may also have a material impact on NRG's ability to retain retail customers. Additionally, NRG may potentially be affected by emerging technologies that may over time affect change in capacity markets and the energy industry overall with the inclusion of distributed generation and clean technology. Some emerging technologies like distributed renewable energy technologies, broad consumer adoption of electric vehicles and energy storage devices could affect the price of energy. These emerging technologies may affect the financial viability of utility counterparties and could have significant impacts on wholesale market prices, which could ultimately have a material adverse effect on NRG's financial condition, results of operations and cash flows.

		Cybersecurity is also a risk for the operation of NRG's businesses. A cyber-attack could cause NRG to incur significant losses of revenues or other substantial liabilities. Technology is included in risk assessments because these emerging technologies may affect the financial viability of utility counterparties and could have significant impacts on wholesale market prices, which could ultimately have a material adverse effect on NRG's financial condition, results of operations and cash flows.
Legal	Relevant, always included	Legal issues, with respect to climate change, are always considered in assessments by the Financial Risk Management Committee. Monitoring of legal risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. NRG is subject to legal risks, including all climate-related litigation claims, that impose extensive and increasingly stringent requirements on NRG's ongoing operations. These environmental requirements and liabilities could adversely impact NRG's results of operations, financial condition and cash flows. Further, demand for NRG's energy-related services could be similarly impacted by consumers' preferences or market factors favoring energy efficiency, low-carbon power sources or reduced electricity usage. For example, there is increased awareness of, and action to combat climate change. Diverse groups of stakeholders are increasingly engaged in efforts to limit global warming in the post-industrial era to well below 2 degrees Celsius. As a result, policymakers and regulators at regional, national, sub-national and local levels of government, both in the United States and other parts of the world, are increasingly focused on actions to combat climate change. NRG operates in the United States and Canada. In the United States, the current Administration has stated that limiting climate change is one of its top priorities. In its early days, the Administration issued an Executive Order on "Tackling the Climate Crisis at Home and Abroad." This included commitments to reset the United States' greenhouse gas emission reduction targets under the Paris Climate Agreement, integrate environmental justice considerations into all aspects of its climate and environmental policy, consider climate change and conservation in federal permitting decisions and align government procurement strategy and standards with climate goals. NRG actively monitors climate change related legal developments that

		could impact its business and regularly engages with a diverse set of stakeholders on these issues. Such engagement helps the Company identify and pursue potential opportunities both to decarbonize its business and better serve its customers. NRG is committed to providing transparent disclosures of its climate risks and opportunities to stakeholders.
Market	Relevant, always included	Market risks are always considered in assessments by the Financial Risk Management Committee. Monitoring of market risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. NRG's CRO reports to the CFO and monitors commercial risks to domestic revenues from commodity and electric power availability or pricing, carbon and emission trading, and renewable energy credits. The EVP of Retail and EVP of Business Solutions identify commercial opportunities and risks to all of NRG's retail businesses. Climate change is producing changes in weather and other environmental conditions, including temperature and precipitation levels, and thus may affect consumer demand for electricity. Additionally, demand for NRG's energy-related services could be impacted by consumers' preferences or market factors favoring energy efficiency, low-carbon power sources or reduced electricity usage. For example, in August 2017 Hurricane Harvey made landfall on the Texas coast where NRG has significant retail and generation operations. During the third quarter of 2017, NRG's Retail business was impacted by Hurricane Harvey by approximately $20 million in part due regional power outages and disruptions in transmission and distribution. Market risks are always included in risk assessments because it may impact revenue.
Reputation	Relevant, always included	Reputational issues are always considered in assessments by the Financial Risk Management Committee. Monitoring of reputational risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. Power generation involves hazardous activities, including acquiring, transporting and unloading fuel, operating large pieces of rotating equipment and delivering electricity to transmission and distribution

		systems. In addition to natural risks such as earthquake, flood, lightning, hurricane and wind, other hazards, such as fire, explosion, structural collapse and machinery failure are inherent risks in the NRG's operations. These and other hazards can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment, contamination of, or damage to, the environment and suspension of operations. The occurrence of any one of these events may result in NRG being named as a defendant in lawsuits asserting claims for substantial damages, including for environmental cleanup costs, personal injury and property damage and fines and/or penalties. This may adversely affect the reputation of NRG. For example, during the August 2017 Hurricane Harvey event, NRG successfully mitigated any reputational risks by providing customer relief to our retail customers including ceasing disconnects and providing payment extensions. Reputational risks are always included in risk assessments because it may impact revenue.
Acute physical	Relevant, always included	Acute physical risks are always considered in assessments by the Financial Risk Management Committee. Monitoring of acute physical risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. Climate change is producing changes in weather and other environmental conditions, including temperature and precipitation levels, and thus may affect consumer demand for electricity. In addition, the potential physical effects of climate change, such as increased frequency and severity of storms, floods and other climatic events, could disrupt NRG's operations and supply chain, and cause them to incur significant costs in preparing for or responding to these effects. These or other meteorological changes could lead to increased operating costs, capital expenses or power purchase costs. NRG's commercial and residential customers may also experience the potential physical impacts of climate change and may incur significant costs in preparing for or responding to these efforts, including increasing the mix and resiliency of their energy solutions and supply. For example, during August 2017 Hurricane Harvey impacted NRG's Texas retail and Gulf Coast operations. For retail, lower gross margin related to the impact of the hurricane was driven by a reduction in load and the unfavorable impact of selling back excess supply along with $7

		million of customer relief. (See NRG 2017 10-K pg. 73) Long- and short-term power prices may also fluctuate substantially due to other factors outside of NRG's control, including weather conditions, including extreme weather conditions and seasonal fluctuations, including the effects of climate change. Such factors and the associated fluctuations in power prices have affected the NRG's wholesale power operating results in the past and will continue to do so in the future. Acute physical risks are always included in risk assessments because they may impact revenue.
Chronic physical	Relevant, always included	Chronic physical risks are always considered in assessments by the Financial Risk Management Committee. Monitoring of chronic physical risks occurs on an ongoing basis. The frequency of reporting varies depending on the materiality and type of risk. Internally, the Financial Risk Management Committee meets quarterly to review existing risks and approve mitigation initiatives. Climate change is producing changes in weather and other environmental conditions, including temperature and precipitation levels. For example, climate change could affect the availability of a secure and economical supply of water in some locations, which is essential for the continued operation of NRG's generation plants. Water risk is monitored by the risk owners (individual plant operators) and reported to NRG management upon changes with a significance 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 at any plant within the subsequent two-year time frame, risk mitigation efforts are identified and economically evaluated for implementation. Chronic physical risks are always included in risk assessments because they may impact revenue.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Enhanced emissions-reporting obligations

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

As a member of a highly regulated industry NRG is directly affected by environmental regulations on power generating assets. This includes risks driven by laws, taxation, or disclosure standards, whether focused directly on GHGs or on other issues that affect GHG emissions. NRG has operations in the United States as well as Canada. To the extent that there is variability to regulatory regimes it makes environmental, corporate sustainability, and risk jobs more complex and additional headcount will be needed to properly monitor and manage potential regulatory risks. Currently we have regional regulatory managers and have recently added more due to all of the action at the state-level.

Additionally, in 2020, (and every year prior since 2014) NRG paid approximately $50,000 to have its emissions inventory voluntarily assured according to accounting standards. This cost could potentially increase as emissions calculations become more complex and stakeholder demand for verification increases. Additionally, as NRG's power generating assets diversify (distributed generation, co-generation, wind, solar, etc.) there will be additional calculation protocol training needed for emissions managers and additional resources including hiring technical expertise.

GHG regulation could increase the cost of electricity generated by fossil fuels, and such increases could reduce demand for the power NRG generates and markets. If carbon pricing were enacted, it would have significant adverse effects on the economics on NRG's coal and natural gas fueled plants which could impact the decision to own, operate or sell these assets. Additionally, government regulations providing incentives for renewable generation could change at any time and such changes may adversely impact NRG's business, revenues, margins, results of operations and cash flows.

Time horizon

Short-term

Likelihood

Unlikely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

200,000

Explanation of financial impact figure

The potential financial impact is meant to be illustrative. The components of the range include hiring costs of a full-time regulatory employee. The cost is estimated based on internal human resources compensation research on average salary for a director-level position.

Cost of response to risk

0

Description of response and explanation of cost calculation

The cost of the response to the risk is estimated at $0. There is no incremental cost to respond to this climate-related risk mitigation response because maintaining adequate staff to manage regional regulatory coverage is part of the normal cost of doing business.

The SVP and General Counsel, heads of Environment, Government and Regulatory Affairs team are responsible for assessing regulatory risks at federal, regional and local agencies. NRG's President and CEO reports to the Board of Directors on any material risks. NRG's Head of Operations and SVP Environmental are responsible for identifying and mitigating environmental risks to operations.

An example of managing transition risks related to climate change is evidenced by NRG's policy and regulatory engagement. In 2017, senior NRG executives presented and testified on key issues related to transition risks such as the Department of Energy (DOE) Grid Reliability and Resilience Proposal. Most of NRG’s power plants sell their output into regional electricity markets under rules set by the Federal Energy Regulatory Commission (FERC). While some regional energy markets address sustainability needs by putting a price on carbon (such as AB 32 in California or the Regional Greenhouse Gas Initiative (RGGI) in the Eastern United States), many don't price environmental externalities into the wholesale price of electricity.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Extreme weather events can impact NRG’s retail electricity providers by causing volatility in energy markets and prolonged customer outages, which lead to lost revenue and increase the likelihood of late bill payments that can impact cash flow. NRG's power generation assets may also be directly impacted by severe weather.

For example, in late August 2017, Hurricane Harvey made landfall on the Texas coast. During the third quarter of 2017, NRG’s Retail business was impacted by Hurricane Harvey by approximately $20 million in part by disruptions in transmission and distribution. This figure was disclosed in NRG's 2017 10-K Annual Report page 68. At the peak, approximately 300,000 customers were without power. During the time that these customers did not have power, NRG lost revenue from the transmission disruption.

Additionally, during Hurricane Harvey NRG's Cottonwood generating station was damaged when the Sabine River Authority opened the floodgates of the Toledo Bend reservoir, which resulted in downstream flooding of the Sabine River. NRG's business continuity plan ensured that essential employees remain at their stations to manage the plant through the weather event. Plant personnel worked on the issues until the generating station was returned to service during the fourth quarter of 2017. A retaining wall was also built near the plant to protect against future flooding.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

20,000,000

Explanation of financial impact figure

Financial impact is meant to be illustrative. Based on the $20,000,000 cost to our operations business from damage to the facility and additional $20,000,000 in lost revenue to the retail business due to transmission disruptions, there may be additional similar costs for future impacts of extreme weather events. This figure was disclosed in NRG's 2017 10-K Annual Report page 68.

Cost of response to risk

Description of response and explanation of cost calculation

The EVP, Retail and SVP, Business Solutions identify commercial opportunities and risks to all of NRG's retail businesses and overseeing the business continuity plan for their departments. NRG's President and CEO reports to the Board of Directors on any material risks. NRG's EVP Operations and SVP Environmental are responsible for identifying and mitigating environmental risks to operations. The Financial Risk Management Committee manages reputational risks to NRG's brand. The Enterprise Risk Management process enables management to manage uncertainty to enhance or preserve enterprise value and facilitates the functional group's management of risk.

For example, during August 2017, NRG's Cottonwood generating station was damaged when the Sabine River Authority opened the floodgates of the Toledo Bend reservoir, which resulted in downstream flooding of the Sabine River. NRG's business continuity plan ensured that essential employees remain at their stations to manage the plant through the weather event. Plant personnel worked on the issues until the generating station was returned to service during the fourth quarter of 2017. A retaining wall was also built near the plant to protect against future flooding.

The cost of the response to the risk is estimated at $0. There is no incremental cost to respond to this climate-related risk mitigation response because contingency planning for extreme weather is part of the normal cost of doing business.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

In the United States, the demand for electricity has gradually decreased over the years but varies widely across states. Historically, although the economy has continued to grow, growth rates for electricity demand have slowed as new, efficient devices and production processes that require less electricity have replaced older, less-efficient appliances, heating, ventilation, cooling units, and capital equipment. NRG's largest business is the retail segment which includes residential as well and commercial and industrial customers. By using less of what we sell, this could impact our profitability. NRG's largest market is Texas, and these customers (market residential, commercial and industrial) accounted for 83% of NRG's total sales volumes for electricity n 2020. If demand for electricity decreased it would have an adverse effect on NRG's revenue for retail sales.

(The U.S. Energy Information Administration forecasts that although near-term electricity demand may fluctuate as a result of year-to-year changes in weather, trends in long-term demand tend to be driven by economic growth offset by increases in energy efficiency. The annual growth in electricity demand averages about 1% throughout the projection period (2019-2050) in the AEO2020 Reference case.)

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

15,000,000

Explanation of financial impact figure

Retail revenue in Texas in 2020 was $6,061 million, therefore a small decrease in demand for electricity could result in a potential impact of approximately $15,000,000 decrease in revenue. Figure is meant to be illustrative only.

Cost of response to risk

0

Description of response and explanation of cost calculation

Our shift in focus towards customer energy services is helping to reduce our reliance on revenue from energy supply. For example, NRG acquired Goal Zero, a consumer goods company that specializes in portable power products. NRG also offers a customized energy solution like Asset-Backed Demand Response (ABDR) and other distributed energy resources, which provide many benefits to customers and utilities. ABDR is designed to capture a stack of retail and wholesale economic benefits while enhancing reliability with on-site electric power generation. The NRG solution can be customized to use the business' existing energy resources, or to deploy new energy resources, like an energy storage system or solar panels.

The cost of the response to the risk is estimated at $0. There is no incremental cost to respond to this climate-related risk mitigation response because NRG's business strategy includes diversifying customer products which is the normal cost of doing business.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other, please specify

Increased demand for products/services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Weather conditions in the regions of the U.S. in which NRG does business influence NRG's financial results. Weather conditions can affect the supply and demand for electricity and fuels. Weather may also impact the availability of the NRG's generating assets. Changes in energy supply and demand may impact the price of these energy commodities in both the spot and forward markets, which may affect NRG's results in any given period. Typically, demand for and the price of electricity is higher in the summer and the winter seasons, when temperatures are more extreme. The demand for and price of natural gas is also generally higher in the winter. However, all regions of the U.S. typically do not experience extreme weather conditions at the same time, thus NRG is typically not exposed to the effects of extreme weather in all parts of its business at once.

To the extent that climate change contributes to the frequency and intensity of weather related events NRG could pick up load in markets where sources are down or offline due to inclement weather. NRG retail operations stand to benefit from any increase in load, for example, extremely hot summers in Texas, while NRG’s wholesale operations could benefit from any increase in pricing associated with extreme temperatures.

Additionally, NRG's Retail group offers a range of products and services that are designed to provide emergency power to our customers when normal distribution is not available. Increasing storms and related electrical service disruptions could increase sales.

For residential and small businesses NRG offers a variety of portable power products. The NRG brand Goal Zero offers portable solar, portable batteries, outdoor lighting and chargers. NRG Street Charge is a solar charging station installed in public places for guests to charge their devices free of charge. NRG Go Portable Power allows users to rent an NRG Go Power Pack to keep their devices charged, and then when they are done charging, return the Power Pack to a conveniently located NRG Go Station or mail the pack in to an office.

For commercial and industrial customers, NRG offers demand-side management helping businesses reduce their energy usage during times of high demand and distributed energy resources for resiliency.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

1,000,000

Explanation of financial impact figure

Potential financial impact represents theoretical increased sales in a growth product like portable solar products and residential battery storage. Figure is meant to be illustrative only. Revenue is not disclosed by brand or business unit so this financial impact is based on consumer product goods sales being a small portion of overall retail sales as reported in the NRG 2020 10-k. To estimate figures more precisely for internal strategic and business planning purposes, we regularly analyze market trends for particular sustainable products and services, the competitive landscape and the differentiation of our offerings relative to competitors, and the investments required to pursue growth in these markets. We see significant opportunity to provide sustainable products and services to our customers, but cannot release specific, forward-looking financial impact figures because these are confidential to NRG.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

NRG retail operations stand to benefit from any increase in load, while NRG's wholesale operations could benefit from any increase in pricing associated with extreme temperatures.

Also, for commercial and industrial customers, NRG offers demand-side management helping businesses reduce their energy usage during times of high demand and

distributed energy resources for resiliency. For example, in 2017 NRG and Cummins announced a strategic partnership to deploy a resilient, cleaner and cost-effective distributed energy platform for commercial and industrial customers. The platform architecture allows for more capacity to meet expanding market needs. In 2018 this offering entered the market. With NRG's asset-backed distributed energy solution, we combine the reliable, clean power provided by Cummins natural gas generators with the insights, analytics, tools, and expertise from NRG. This solution is designed to produce meaningful savings for participating customers, offering them a guaranteed outcome every month on energy expenditures with assets that can be engineered for specific generation needs. Customers will also receive access to our unique Active Management Platform (AMP) dashboard, which can be customized to fit energy concerns and goals. The AMP dashboard offers robust data analytics, including load projections, market summaries, and weather forecasts, that provide a holistic portrait of energy consumption, past and present, so customers can make informed energy decisions.

NRG will own, operate, and maintain the generator—and this behind-the-meter asset will produce electricity to offset power consumption from the grid and contribute revenue through demand response market programs. With NRG's load modification that adjusts the usage profile for a lower commodity cost outcome, organizations are now able to supplement power from the grid, reap the financial benefits of surplus power, and hit sustainability goals as they monitor energy consumption. These companies can expect to see a 10-15% savings on energy costs, and as a result, organizations will be empowered to plan for the future, knowing that their energy expenditures have guaranteed outcomes and backed reliability.

The cost of the response to the risk is estimated at $0. There is no incremental cost to realize this climate-related opportunity because NRG's business strategy includes diversifying retail customer products which is the normal cost of doing business.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

Potential opportunities are legislation or policies that enhance investment in and development of new clean technologies, products and services, and customer demand for NRG's products and services and open up new energy markets for competitive power sales.

NRG supports competitive changes to retail and wholesale markets that make it easier to drive sustainable outcomes and save money for consumers. Because oversight of the electric industry is split between federal and state regulators, the best solutions involve cooperation between both sets of regulators to craft regulations that drive market-based sustainable outcomes.

For example, all of our Retail businesses including Reliant, Green Mountain Energy, and NRG all offer zero-emission or low-emission retail rate plans. All of our retail offerings are regulated by the appropriate State entity. However, those plans are only available to customers in parts of the country that allow retail choice, largely Texas, the mid-Atlantic states, and states in the Northeast. Action at the State level is necessary in other parts of the country to allow customers to choose their provider.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

2,000,000

Explanation of financial impact figure

Potential financial figure includes theoretical revenue from new geographical territories where NRG could attract retail electricity customers. Figure is meant to be illustrative only.

Cost to realize opportunity

500,000

Strategy to realize opportunity and explanation of cost calculation

NRG engages with policy makers and industry groups to support competitive changes to retail and wholesale markets that make it easier to drive sustainable outcomes and save money for consumers. For example, in 2018 NRG's CEO published an Op-Ed about the need for more retail electricity competition. This article supports legislators, regulators, utilities, competitive retailers and consumer groups joining forces to implement competition for the benefit of consumers. Subsequently, NRG does not support bailouts or subsidies for uneconomic coal and nuclear plants. These issues are continuing to be discussed in policy and regulatory environments.

To see regulatory filings, white papers, presentations and other materials NRG has prepared and submitted that set forth our positions on a variety of critical subjects driving our business and the industry please visit: https://www.nrg.com/energy-policy.html

Potential cost to realize opportunity represents the cost of hiring additional full-time employees to engage policy makers and lobby for opening up energy market for competitive retail energy. Figure is meant to be illustrative only.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Opportunities in the U.S. are emerging for clean technologies and market expansion. NRG retail business provides home energy and related services as well as personal power to consumers through various brands and channels across the U.S. These brands include Reliant, Green Mountain Energy and NRG offer renewable energy, carbon offset, and smart energy management products that help businesses and consumers reduce their carbon footprint. NRG's consumer product brand, Goal Zero includes portable solar panels, lightweight recharger kits and rechargeable lanterns. Retail customers make purchase decisions based on a variety of factors, including price, customer service, brand, product choices, bundles or value-added features. Customers

purchase products through a variety of sales channels including direct sales, call centers, websites, brokers and brick-and-mortar stores.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

1,000,000

Explanation of financial impact figure

Potential financial figure includes theoretical revenue from new customers that choose NRG retail low-carbon products. Figure is meant to be illustrative only.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

Through its broad range of service offerings and value propositions, NRG's retail business is able to attract, retain, and increase the value of its customer relationships. NRG's retailers are recognized for exemplary customer service, innovative smart energy and technology product offerings and environmentally friendly solutions.

For example, in 2018 NRG contracted a 25 megawatt solar project for Sysco, to power their Texas operations and advance sustainability. Working together with Sysco, NRG is also helping meet the promise of the customer-choice market in Texas, with a truly distinctive, cost-effective solar energy plan – the kind sought by many commercial and industrial customers today. As part of the agreement, three solar garden sites are being constructed in the Houston and Dallas areas, which will support approximately 10 percent of Sysco's U.S. electricity usage. The environmental benefits of this program include reducing approximately 37,000 tons of CO2 emissions a year, which equates to taking more than 7,000 cars off the road. The solar garden sites total 25 megawatts of renewable energy generation and will support the majority of the Company's electricity load in Texas, including the Corporate Headquarters.

Potential cost to realize opportunity is estimated at $0. There is no incremental cost to realize this climate-related opportunity because NRG's busines strategy already includes focusing on customer low-carbon products and services and is part of the normal cost of doing business.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, but we intend it to become a scheduled resolution item within the next two years	

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
2DS DDPP IEA B2DS Other, please specify US Fourth National Climate Assessment, AEO2020 Reference	In 2018 NRG conducted climate scenario analysis looking at four specific temperature scenarios: 1.5 degrees Celsius (C), 2 degrees C, 3 degrees C and 4 degrees C. These scenarios incorporated credible climate projections for emissions reductions and climate impacts. One of the objectives of this exercise was to create a shared perspective on key risks, opportunities and options to enhance resilience in the face of climate change. While aspects of this are already part of NRG's routine enterprise risk management process, this exercise allowed the potential for improved

	futures thinking capability of NRG and a more holistic understanding of emerging issues that will confront the business. In this initial exercise we use long-term macro-trends relevant to the electric power sector. Numerous variables are influenced by climate change, such as commodity demand or the cost of carbon. The qualitative results were presented to management and documents in annual Sustainability Reports. In 2020 we started a transition-risk based climate scenario analysis was conducted including an analysis of fuel mix of NRG power plants and GHG intensity with various carbon prices. We analysed the impact of several third-party carbon pricing scenarios: the International Energy Agency's Sustainable Development Scenario, which is aligned with keeping global warming to well below 2 degrees Celsius by mid-century and the U.S. Energy Information Agency's Annual Energy Outlook 2020, which contains three alternative carbon fee cases. The analysis showed that the fuel mix and carbon intensity of electricity sold by NRG is highly sensitive to a carbon prices. Although NRG will continue to own and operate some traditional power generation plants, expected portfolio changes will reduce both NRG"s total carbon footprint and carbon intensity, thereby reducing climate-related risk from carbon pricing policies and regulations. Furthermore, renewables will be an increasing part of the electricity NRG sells to customers. NRG's focus on retail rather than power generation puts the Company is a favorable position as it focuses on growing retail products and services and diversifies business away from traditional power generation. The full TCFD report will be released in late 2021.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Extreme weather events can impact NRG's retail electricity providers by causing volatility in energy markets and prolonged customer outages, which lead to lost revenue and increase the likelihood of late bill payments that can impact cash flow. NRG's strategy with respect to products and services is to meet the need of its customers by

		providing a variety of energy products and services. To mitigate the short-term risks of extreme weather events, and other risks, on our customers NRG develops various products and services that are offered throughout NRG's brands. When considering possible solutions, NRG analyzes how a business uses electricity and develops a tailored plan for staying fully operational in an optimal manner. Specifically, one product NRG provides is Distributed Energy Resources. As the climate shifts and creates stronger, more dramatic storms, businesses need to be proactive and forward-thinking with how they approach energy. Employing a distributed energy resource (DER) provides the reliability needed to ensure the power stays on during extreme weather. DERs are power generators installed on-site that either produce or store energy for a business and/or the grid. So, rather than solely consuming energy and subtracting energy from the grid, on-site generation can produce and add energy to it. This is done through four primary strategies: renewable energy, fossil fuel generators, demand response, and microgrids. In late August 2017, Hurricane Harvey made landfall on the Texas coast. The relative impact to NRG's operations was of medium magnitude. During the third quarter of 2017, NRG's Retail business was impacted by Hurricane Harvey by approximately $20 million partly because of disrupted downstream transmission and distribution. Alternately, extreme heat in the summers drives up demand for electricity and provides an opportunity for increased revenue from retail sales of power. Our expertise is leading customers to greater levels of cost stability and resilience, expanding their view of what sustainability can mean in the process. In this way, we're bringing real-world value to businesses and communities, by showing them how to combat extreme climate events with reassurance and forward energy planning.
Supply chain and/or value chain	Yes	Supply chain impacts, including ones related to climate, are important because NRG's costs, results of operations, financial condition and cash flows could be adversely impacted by disruption of its upstream fuel supplies, which

		may be driven by both physical and climate risks and ongoing transition climate risks. NRG relies on natural gas, coal and oil to fuel a majority of its power generation facilities. Delivery of these fuels to the facilities is dependent upon the continuing financial viability of contractual counter parties as well as upon the infrastructure (including rail lines, rail cars, barge facilities, roadways, riverways and natural gas pipelines) available to serve each generation facility. As a result, NRG is subject to the risks of disruptions or curtailments in the production of power at its generation facilities if no fuel is available at any price or if a counter party fails to perform or if there is a disruption in the fuel delivery infrastructure. In order to mitigate this risk NRG continually monitors it's available fuel suppliers and may decide to pre-purchase fuel and diversify the fuel mix and supplier base. This occurred during extreme cold weather events on the Eastern or Gulf Coast of the U.S. where ice creates safety hazards for unloading barges and sustained cold closes operations. When the ice melts the river rises and currents are too swift, further hampering deliveries. water risk regarding the impact for barge delivery is evaluated on a daily basis, with contingency plans developed as needed. NRG assets located along the Eastern or Gulf coast of the U.S. that rely on barge fuel delivery may be impacted if there is a disruption. So decisions may be made to find alternate land-based transportation in order to avoid shortages.
Investment in R&D	Yes	Investment in R&D as related to climate, is important to our strategy because changes in technology may impair the value of NRG's power plants or retail products. Research and development activities are ongoing to provide alternative and more efficient technologies to produce power, including wind, photovoltaic (solar) cells, energy storage, and improvements in traditional technologies and equipment, such as more efficient gas turbines. Advances in these or other technologies could reduce the costs of power production to a level below what the NRG has currently forecasted, which could adversely affect its cash flows, results of operations or competitive position. NRG may also potentially be affected by emerging technologies that may over time affect change the energy

		industry overall with the inclusion of distributed generation and clean technology. Some emerging technologies like distributed renewable energy technologies, broad consumer adoption of electric vehicles and energy storage devices could affect the price of energy. These emerging technologies may affect the financial viability of utility counterparties and could have significant impacts on wholesale market prices, which could ultimately have a material adverse effect on NRG's financial condition, results of operations and cash flows. NRG funds and participates in programs and projects like the NRG COSIA Carbon XPRIZE. The Carbon XPRIZE, started in 2015, was a five-year global competition developed to address rising CO2 emissions by challenging innovators around the world to develop breakthrough technologies that convert the most CO2 into products with the highest net value. The winners share a $20 million prize to implement their start-up venture. This opportunity would have a medium impact on the Company depending on the nature of the winning innovations.
Operations	Yes	NRG's businesses and operations are subject to physical, market and economic risks relating to potential effects of climate change. The potential physical effects of climate change, such as increased frequency and severity of storms, floods and other climatic events, could disrupt NRG's operations and supply chain, and cause them to incur significant costs in preparing for or responding to these effects. These or other meteorological changes could lead to increased operating costs, capital expenses or power purchase costs. NRG's commercial and residential customers may also experience the potential physical impacts of climate change and may incur significant costs in preparing for or responding to these efforts, During August 2017, NRG's Cottonwood generating station was damaged when the Sabine River Authority opened the floodgates of the Toledo Bend reservoir, which resulted in downstream flooding of the Sabine River. The generating station was returned to service during the fourth quarter of 2017. NRG estimates the impact of the Cottonwood damage and Hurricane Harvey on Gulf Coast Generation to be approximately $20 million. To the extent that NRG were to acquire a new generating

		station these and other considerations would be factored into the strategic decision. Management considers these risks monthly as part of business strategy and continuity.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues	Extreme weather events could be a risk and decrease revenue. NRG operates power generating stations which are subject to physical damage if acute weather events occur. During August 2017, NRG's Cottonwood generating station was damaged when the Sabine River Authority opened the floodgates of the Toledo Bend reservoir, which resulted in downstream flooding of the Sabine River. The generating station was returned to service during the fourth quarter of 2017. NRG estimates the impact of the Cottonwood damage and Hurricane Harvey on Gulf Coast Generation to be approximately $20 million. NRG continues to dedicate resources to business continuity plans to ensure plants are able to run when needed and with the highest degree of safety. Alternately, extreme heat in the summers drives up demand for electricity and provides an opportunity for increased revenue from retail sales of power. Additionally, an opportunity to increase revenue may be possible with favorable energy policy. Demand for NRG's energy-related services could be impacted by consumers' preferences or market factors favoring energy efficiency, low-carbon power sources or reduced electricity usage.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2014

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2014

Covered emissions in base year (metric tons CO2e)

63,300,000

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2025

Targeted reduction from base year (%)

50

Covered emissions in target year (metric tons CO2e) [auto-calculated]

31,650,000

Covered emissions in reporting year (metric tons CO2e)

27,726,002

% of target achieved [auto-calculated]

112.3980979463

Target status in reporting year

Achieved

Is this a science-based target?

Yes, and this target has been approved by the Science-Based Targets initiative

Target ambition

1.5°C aligned

Please explain (including target coverage)

NRG became the first power company in North America to have our goal certified by SBTi to be aligned with 1.5 degrees Celsius. In 2020 reduced load as a result of the COVID-19 pandemic decreased emissions significantly as a result of decreased generation. We believe the 2020 emissions level may change as load recovers from the impact of COVID-19 and NRG is continuing to target a 50% reduction by 2025.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)
Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2016

Target coverage

Other, please specify

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Engagement with suppliers
Percentage of suppliers actively engaged on climate-related issues

Target denominator (intensity targets only)

Base year
2017

Figure or percentage in base year
0

Target year
2021

Figure or percentage in target year
50

Figure or percentage in reporting year
41

% of target achieved [auto-calculated]
82

Target status in reporting year
Underway

Is this target part of an emissions target?
No

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain (including target coverage)
NRG participates in the CDP Supply Chain engagement program. We ask our top suppliers to disclosure information about their climate change performance. Our goal is to have 50% of our top suppliers disclosing to CDP by 2021. In 2020 we had a 41% response rate.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1

Target year for achieving net zero

2050

Is this a science-based target?

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

scope 1, scope 2, and scope 3 business travel

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	1	282,000
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Fugitive emissions reductions

Carbon capture and storage/utilization (CCS/U)

Estimated annual CO2e savings (metric tonnes CO2e)

282,000

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

300,000,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Petra Nova is the world's largest post-combustion carbon capture facility, located at our WA Parish Generating Station southwest of Houston. Since late 2016, the project has combined 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. The project can capture more than 5,000 tons of CO2 per day, and in 2020, the system sequestered approximately 282,000 metric tons of CO2. Due to market conditions Petra Nova only operated for a few months of 2020.

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 averages more than 5,000 barrels per day from around 300 barrels a day before we began EOR operation. The financial investment required represents just NRG's portion and not other partners. The financial investment Financing of Petra Nova includes equity contributions from both NRG and JX Nippon of approximately $300 million each. NRG's contribution includes investments already incurred during development of the project which will become assets of the joint venture. Annual monetary savings is not available. The values reported and payback period are illustrative and are subject to change.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Employee engagement	'PowerUPmylife' is a web-based and mobile platform where NRG employees can take actions that reflect sustainable choices at work and at home. The program launched at the end of 2014 and continues to be a place where employees engage in topics ranging from water conservation

	to NRG-specific activities such as wellness programs available to employees. 18% of all employees participate in the program, with the vast majority taking action on a regular basis. Employees have taken over 15,000 actions including energy efficiency, waste management, personal awareness and emissions reduction – for example, unplugging chargers and appliances when not in use, recycling, taking the stairs instead of the elevator and cooking a meat-free meal.
Internal incentives/recognition programs	NRG offers incentives to employees to purchase products that reduce GHG emissions. For example, there is an employee monthly commuter stipend to incentivize using public transportation. Green Mountain Energy has a comprehensive employee engagement program designed to provide employees with options for understanding and taking action to reduce their environmental impact—at work and at home. Program offerings include discounts on renewable energy products, residential solar installations, carbon offsets, and outdoor recreation programs; an employee green team that organizes environmental events and updates internal environmental policies and practices; an incentive-based Green Commuter Program; an office farm food delivery program; and the ability to contribute to environmental non-profits and the Green Mountain EnergyTM Sun ClubTM through pay check deductions. Please visit the GME website for more detail: http://www.greenmountainenergy.com/our-story/sustainability/employee-sustainability-programs/ Additionally, NRG Employees receive a discount when purchasing portable solar products from Goal Zero. Through econrg, we promote ecological stewardship among our plant employees with initiatives aimed at improving environmental awareness and education.
Dedicated budget for low-carbon product R&D	Goal Zero, an NRG owned company, offers portable solar power products. Low-carbon product R&D is a key part of Goal Zero's business model. Since 2007, Goal Zero has developed and provided portable equipment to help people all over the world get the power they need.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Company-wide

Description of product/Group of products

NRG's retail products and services provide both retail and commercial & industrial customers with choices for cleaner electricity, systems to track and reduce use and smart energy management products.

For example, Our Green Mountain Energy (GME) brand is the nation's longest serving company dedicated to providing 100% renewable energy to businesses and residents. Primarily leveraging wind and solar sources, GME brings cleaner, greener energy to customers in Texas and 11 other states. In 2018, GME electricity plans enabled business customers to avoid 1.5 billion pounds of CO2 and residential customers to avoid 6.1 billion pounds.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

As, there is not a standard methodology for calculating avoided emissions, NRG used best available data to estimate the impact of our low-carbon products

% revenue from low carbon product(s) in the reporting year

0

Comment

The exact revenues from these low-carbon businesses are not available.

For example, Green Mountain is an office-based corporate entity. Because Green Mountain does not own any generation assets, the operational control approach was chosen for reporting emissions data from direct and indirect sources. We only count the avoided CO2 emissions attributable to "new" renewable energy facilities as defined by the Center for Resource Solutions (CRS) as part of the Green-e Energy National Standard. CRS defines "new" facilities as those that began operation or were repowered within the past 15 years (e.g., 2000 for 2014 sales, 2001 for 2015 sales). The energy generated by these new facilities displaces the need for an equivalent amount of energy from fossil fuel-powered facilities, thereby avoiding the CO2 emissions that would have been created in the absence of the renewable energy generation.

Level of aggregation

Group of products

Description of product/Group of products

Goal Zero develops and offers portable solar power systems. The company provides batteries, power packs, and generators; solar panels; small and large solar kits; lanterns, flashlights, and more; speakers, cables, tripods, light cords and adapters, and inverters and trickle chargers; and apparel. Its products are used in power phones, head lamps, power tablets, laptops, cameras, refrigerators, TVs, and more. The company offers products online. It serves customers worldwide. The company was founded in 2009 and is based in Bluffdale, Utah. As of September 16, 2014, Goal Zero operates as a subsidiary of NRG Energy, Inc.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

As, there is not a standard methodology for calculating avoided emissions, NRG used best available data to estimate the impact of our low-carbon products

% revenue from low carbon product(s) in the reporting year

Comment

The exact revenues from these low-carbon product lines are not available.

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

NRG engages with natural gas producers in its supply chain to reduce methane emissions. For example. to encourage responsible natural gas production, NRG joined with 8 companies that comprise 12% of the market for delivered gas in the U.S. as part of the Natural Gas Supply Collaborative (NGSC). After months of detailed work, the Collaborative issued a report in October 2017 entitled "Environmental and Social Performance Indicators for Natural Gas Production" calling on natural gas producers to disclose information related to methane and air emissions, water, chemicals and community health and safety. NRG is an ongoing member of the NGSC.

Our strategy is to engage with suppliers on natural gas emissions. NRG does not own operations with significant methane emissions. However,natural gas is an increasingly important fuel to keep power affordable and to add flexible fast-start capacity that allows faster scaling of renewables on the grid.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1, 2014

Base year end
December 31, 2014

Base year emissions (metric tons CO2e)
63,300,000

Comment
Emissions from domestic generation only

Scope 2 (location-based)

Base year start
January 1, 2014

Base year end
December 31, 2014

Base year emissions (metric tons CO2e)
254,000

Comment

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

29,767,523

Comment

Includes 37.5 % of a 1613MW capacity coal plant in Australia.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

241,460

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Mobile refrigerated emissions in the U.S. and Australia and scope 2 purchased electricity in Australia.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

The emissions from excluded sources are insignificant when compared to Scope 1 and 2 emissions from US domestic generation. The effort to calculate these emissions on an annual basis is disproportionately large compared to the small amount of immaterial information.

C6.5

(C6.5) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Please explain

Emissions from goods and services vary annually according to NRG's purchases. In 2017 NRG used a third-party to calculate the footprint based on spend data. This scope

3 was not calculated for 2018 nor 2019 because it was deemed too resource intensive and not as material as scope 1 emissions. We also do not believe that the quality of this data is reliable and thus are not including it in inventory. However we are monitoring this issue if it becomes more relevant.

In 2017 NRG used a third-party technical firm to calculate the estimated carbon footprint for our supply chain. This third-party used spend data from NRG's full supply chain footprint, including those who provide raw materials and services. This third-party removed spend for taxes, payment refunds and similar items that do not relate directly to producing NRG's own market offerings and then eliminated the lowest 10% of expenditures to focus the analysis on the most significant vendors. The remaining spend and associated suppliers was evaluated using both public disclosures and modeled impacts—when public data were not available—to estimate the GHG emissions for each supplier and spend sector. The third-party applied its proprietary environmental economic input output (EEI-O) life cycle based model for quantifying environmental impacts. This technique utilizes extensive government census data for over 464 business sectors and the economic interactions between each sector. It also aligned its GHG calculations with the WRI/WBCSD Greenhouse Gas Protocol for Scope 3, category 1 (purchased goods and services).

Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions.

In 2021 we intend to evaluate scope 3 emissions from the sale of gas and electricity and will provide updated information in a subsequent reporting cycle.

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

NRG defines capital good as the purchase of equipment and machines. Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, not yet calculated

Please explain

Power purchased for resale is under evaluation. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions.

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

NRG defines upstream transportation and distribution as third party logistics. Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Please explain

NRG defines waste generated in operations as waste management and disposal companies. Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2,487

Emissions calculation methodology

Business travel emissions include hotel stays, car rentals and air travel incurred by United States based company employees and booked through NRG's primary travel agent. Emissions are determined using the Carbonfund.org Foundation's transportation calculator. Data are obtained through Adelman, NRG's travel agent provider.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

800

Emissions calculation methodology

NRG has calculated employee commuting in the past from an internal survey of employees. In prior years, NRG has estimated GHG emissions from employee commuting based on internal surveys and dollars spent on public transportation through a company subsidized program.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

NRG used an internal survey to estimate scope 3 emissions from employee commuting. NRG has significantly fewer employees in 2020 than prior years so the number is even smaller.
It is not a material source of emissions compared to scope 1.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

NRG defines upstream leased assets as rental properties. Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

NRG does not own any transmission or distribution lines.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

NRG is an integrated power company and does have physical products to process.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

NRG is an integrated power company. Our wholesale generation business scope 1 emissions are most relevant when it comes to climate action. However, though our retail businesses we are able to sell products that directly reduce our customers' scope 1+2 as well as increase our brand/reputation/social license to operate. As our business grows this category will become more relevant.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

NRG is an integrated power company. Our wholesale generation business scope 1 emissions are most relevant when it comes to climate action. However, though our retail businesses we are able to sell products that directly reduce our customers' scope 1+2 as well as increase our brand/reputation/social license to operate. As our business grows this category will become more material. NRG owns Goal Zero which sells portable solar products.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

NRG is an integrated power company. NRG has some rental properties that we sublet but these are not relevant to our primary business of retail and wholesale electricity.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

NRG does not have any franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

NRG defines investments as financial transactions. Scope 1 GHG emissions are most material for electricity generators to the extent that the US EPA requires reporting under 40 CFR Part 98. Though these sources are relevant to electricity production, the Scope 3 GHG emissions are not material compared to NRG's Scope 1 GHG emissions.

Other (upstream)

Evaluation status

Not evaluated

Please explain

Other (downstream)

Evaluation status

Not evaluated

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0033

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

29,767,523

Metric denominator

unit total revenue

Metric denominator: Unit total

9,093,000,000

Scope 2 figure used

Location-based

% change from previous year

5.4

Direction of change

Decreased

Reason for change

Prior year intensity was .0039. Emissions and revenue declined
The primary factor leading to the decreased emissions intensity include reductions in fleet wide annual net generation due to a COVID-19 market conditions. 2019 scope 1 global and scope 2 emissions were approximately 39,187,000 mmt CO2e. 2019 revenue was $9,821 million. 39,187,000/9,821,00,000=.0039.
0039/.0033-1*100=5.4%
(Assets included based on equity ownership as of Dec. 31, 2020)

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	29,610,788	Other, please specify Mandatory GHG Reporting Tule, 40 CFR Part C
CH4	62,551	Other, please specify Mandatory GHG Reporting Tule, 40 CFR Part C
N2O	94,184	Other, please specify Mandatory GHG Reporting Tule, 40 CFR Part C

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment

Fugitives	0	0	0	0	
Combustion (Electric utilities)	29,576,943	62,551	0	29,767,523	
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	0	0	0	0	
Emissions not elsewhere classified	0	0	0	0	

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
North America [1]	27,484,542
Australia [2]	2,282,981

[1] Values have been rounded

[2] Values have been rounded

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Combustion	29,767,523

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	29,767,523	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	663	Decreased	0.001	In 2020, NRG's headquarters in Princeton, New Jersey produced enough solar energy to meet 25% of the facility's annual demand. Global GHG emissions (scope 1&2) for NRG in 2020 were 30,008,983 so this activity is <.01%
Other emissions reduction activities	240	Decreased	0.001	Energy efficiency projects reduced local emissions at generating stations through NRG's econrg program. Some of these activities included installing solar-powered lighting, behavior change of employees and LED lighting in the facilities. Global GHG emissions (scope 1&2) for NRG in 2020 were 30,008,983 so this activity is <.01%
Divestment	0		0	
Acquisitions	0		0	
Mergers	0		0	
Change in output	9,100,000	Decreased	28.5	Calculated as the change in emissions from 2019 to 2020 as a percentage of 2019 emissions {= [30,008,983-42,000,000)/42000000 * 100}. As previously discussed in C6.10, the primary factor leading to the decreased emissions was reductions in fleet wide

				annual net generation due to a COVID-19 market conditions. (Lower generation due to COVID-19 impact on demand.)
Change in methodology	0		0	
Change in boundary	0		0	
Change in physical operating conditions	0		0	
Unidentified	0		0	
Other	0		0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 25% but less than or equal to 30%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No

Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	853,617.91	50,167,958	51,021,575
Consumption of purchased or acquired electricity		0	519,316	519,316
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		853,617	50,687,274	51,540,891

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

8,984

Gross electricity generation (GWh)

19,481

Net electricity generation (GWh)

17,590

Absolute scope 1 emissions (metric tons CO2e)

13,342,676

Scope 1 emissions intensity (metric tons CO2e per GWh)

684.91

Comment

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Oil

Nameplate capacity (MW)

3,680.4

Gross electricity generation (GWh)

403

Net electricity generation (GWh)

320

Absolute scope 1 emissions (metric tons CO2e)

260,356

Scope 1 emissions intensity (metric tons CO2e per GWh)

646.04

Comment

Gas

Nameplate capacity (MW)

9,160.23

Gross electricity generation (GWh)

17,166.1

Net electricity generation (GWh)

16,537.6

Absolute scope 1 emissions (metric tons CO2e)

9,042,945

Scope 1 emissions intensity (metric tons CO2e per GWh)

526.79

Comment

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Nuclear

Nameplate capacity (MW)

1,162.47

Gross electricity generation (GWh)

10,144.5

Net electricity generation (GWh)

9,677.8

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Hydropower

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Wind

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Solar

Nameplate capacity (MW)

386.19

Gross electricity generation (GWh)

853.6

Net electricity generation (GWh)

853.6

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Total

Nameplate capacity (MW)

23,373.29

Gross electricity generation (GWh)

48,048.2

Net electricity generation (GWh)

44,979

Absolute scope 1 emissions (metric tons CO2e)

29,767,523

Scope 1 emissions intensity (metric tons CO2e per GWh)

619.53

Comment

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

No

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Coal – hard	15,463,000	11.4	2020	
Oil	6,784,000	5	2020	
Gas	48,671,000	35.7	2020	
Nuclear	65,268,600	47.9	2020	
Solar	0	0	2020	

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Distributed generation	As an integrated provider of supply and distributed energy resources (DER), NRG's Business Solutions group focuses on distributed products and services as businesses seek greater reliability, cleaner power or other benefits that they cannot obtain from the electric grid. These solutions include system power, distributed generation, solar and wind products, carbon management and specialty custom products.	0	0	2021

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment

Carbon capture and storage/utilisation	Applied research and development	≤20%		NRG supports the COSIA Carbon X-PRIZE. The $20 million NRG COSIA Carbon XPRIZE is a global competition to develop breakthrough technologies that will convert CO_2 emissions from power plants and industrial facilities into valuable products like building materials, alternative fuels and other every day items. The NRG COSIA Carbon XPRIZE inspires development of new and emerging CO_2 conversion technologies to help solve climate change. Finalist teams are challenged to scale-up up their carbon conversion technologies under real world conditions at industrial test centers to compete for one of two grand prizes. Five teams will demonstrate their technologies at the Alberta Carbon Conversion Technology Centre in Calgary, and five will exhibit at the Wyoming Integrated Test Center in Gillette. Finalists are preparing to make the move to these test centers and are expected to begin demonstrating in the summer of 2020. The announcement of the winners was delated due to COVID restrictions. More info please visit: https://carbon.xprize.org/prizes/carbon

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place

Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

NRG GHG Report FY20 v2.pdf

Page/ section reference
Page 2

Relevant standard
Attestation standards established by AICPA (AT105)

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

NRG GHG Report FY20 v2.pdf

Page/ section reference

Page 2

Relevant standard

Attestation standards established by AICPA (AT105)

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Business travel

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

NRG GHG Report FY20 v2.pdf

Page/section reference

Page 2

Relevant standard

Attestation standards established by AICPA (AT105)

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

California CaT - ETS

RGGI - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

California CaT

% of Scope 1 emissions covered by the ETS

6.8

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

0

Allowances purchased

2,036,646

Verified Scope 1 emissions in metric tons CO2e

2,036,646

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Includes emissions from California assets owned and operated as of Dec. 31, 2020. Total 2020 scope 1 emissions were 29,576,943 metric tons CO2e.

RGGI - ETS

% of Scope 1 emissions covered by the ETS

3.3

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1, 2020

Period end date

December 31, 2020

Allowances allocated

0

Allowances purchased

950,767

Verified Scope 1 emissions in metric tons CO2e

950,767

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

Includes emissions from assets owned and operated as of Dec. 31, 2020

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

NRG's strategy is to ensure we have sufficient emissions allowances as required by regulation. In cases where we receive allocations of allowances, we rely on those. If additional allowances are required beyond any allocation we receive, we purchase those.

The strategy manifests as follows in the markets in which we operate:

California has a CO2 cap- and-trade program governed by California Assembly Bill 32 (AB32). This program applies to electric generating units greater than 25 MW. The impact of this program on NRG depends on the cost of the allowances and our ability to pass these costs

through to customers. In 2020 in the California AB32 market, we were not allocated any allowances so we purchased 2,206,270 to comply with the rule.

In the Regional Greenhouse Gas Initiative (RGGI) markets in which NRG operates generating units – namely Connecticut, Delaware, Maryland, and New York – there is a regional cap and trade system for CO2. In 2013, each of these states finalized a rule that reduced and will continue to reduce the number of allowances through 2020. The nine RGGI states re-evaluated the program and published a model rule to further reduce the number of allowances. The revisions being currently contemplated could adversely impact NRG's results of operations, financial condition, and cash flows. In 2020 in the RGGI market, NRG purchased 950,767 allowances to comply with the rule.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 2
Scope 3

Application

NRG uses internal carbon prices for two applications.

First, NRG calculates the net present value of the incremental cash flow per metric ton of CO2e that would be reduced by pursuing various decarbonization pathways. Second, NRG uses carbon price scenario analysis both to assess risk for internal financial purposes as well as for evaluating transition risk for Task Force on Climate-related Financial Disclosures (TCFD) reporting. Using carbon pricing scenario analysis allows us to understand the impact of potential carbon pricing on our business. In the short-term, the main impact is the financial cost of paying a carbon price when running our power plants. Over the medium and long-term, the impacts include how carbon prices would influence the fuel diversity of the power we provide to customers and therefore the fuel mix of our power plant portfolio.

Actual price(s) used (Currency /metric ton)

0

Variance of price(s) used

For the first application of carbon pricing described above, NRG calculates the net present value of the incremental cash flow per metric ton of CO2e that would be reduced by pursuing various decarbonization pathways. This figure is calculated (rather than set), and therefore varies by decarbonization pathway. Such pathways include coal-to-gas switching; carbon capture, use, and storage; asset retirements; operations improvement; and the day-to-day and longer-term fuel mix used to operate our power plant portfolio. As such, this metric – alongside other criteria including safety, reliability, and profitability – informs capital expenditure, operating expenditure, and product and service development decisions. Knowing this metric allows us to rank order potential investments, and all else equal, choose decarbonization pathways that maximize CO2e reduction at lowest cost. In addition, we compare this metric with statutory carbon prices in the jurisdictions in which we operate to determine when it would be economic to make an investment to reduce our carbon footprint.

For the second application of carbon pricing described above, NRG uses the carbon prices in the relevant third-party scenario. For the International Energy Agency's Sustainable Development Scenario, the carbon price for power companies in developed economies ranges from $100 in the 2030-2040 timeframe to $140 in the 2040-2050 timeframe (2018 dollars). For the U.S. Energy Information Agency's Annual Energy Outlook 2020, there are three carbon fee cases -- $15, $25, and $35 – each of which starts in 2021 and escalates at 5% annually through 2050. In real terms, 2050 carbon prices range from $61.70 ($15 case) to $144.10 ($35 case), while in nominal terms, they range from $128.27 ($15 case) to $304.94 ($35 case).

Type of internal carbon price

Other, please specify

NRG uses internal carbon pricing in a variety of scenarios with different uses. Because we have two distinct applications of carbon pricing as described previously, we selected "other".

Impact & implication

NRG's first application of carbon pricing informs capital expenditure, operating expenditure, and product and service development decisions, alongside other criteria including safety, reliability, and profitability. The metric we calculate allows us to rank order potential investments, and all else equal, choose decarbonization pathways that maximize CO2e reduction at lowest cost. In addition, we compare this metric with statutory carbon prices in the jurisdictions in which we operate to determine when it would be economic to make an investment to reduce our carbon footprint.

NRG's second application of carbon pricing allows us to understand the impact of potential carbon pricing on our business. In the short-term, the main impact is the financial cost of paying a carbon price when running our power plants. Over the medium and long-term, the impacts include how carbon prices would influence the fuel diversity of the power we provide to customers and therefore the fuel mix of our power plant portfolio.

More fundamentally, NRG believes that the American energy industry is going to be increasing impacted by the long-term societal trend towards sustainable forms of energy that have low or no GHG emissions, at both the utility scale and smaller distributed energy resource level. To meet this trend, NRG has focused its growth strategy on providing sustainable products and services to its customers, including renewable electricity plans, lower carbon natural gas, certified carbon offsets, energy storage, demand response programs, and energy efficiency products and services. Our internal use of carbon pricing for scenario analysis allows us to test internal views of the extent and rapidity of the demand for such products and services and to adjust investment decisions accordingly. Our strategy is designed to mitigate climate risks over the short, medium, and long-term.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

25

% total procurement spend (direct and indirect)

90

% of supplier-related Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

NRG's supply chain consists of a wide range of procurement activities, including fuel purchases, operations and maintenance, renewables, capital projects and services. In 2017, we broadened our reporting efforts by becoming the first U.S. power producer to participate in the CDP Supply Chain Program. As part of this initiative, we encouraged more than 300 suppliers representing 90% of supply chain spend to disclose information about their climate change performance. In 2017 the suppliers were elected based on those representing 90% of supply chain spend.

In 2020 we continued this engagement using the same filter of 90% of supply chain spend. We chose to use 90% of spend because that accounts for the majority of our suppliers and the most material environmental impacts.

Impact of engagement, including measures of success

Non-monetary incentives include opportunities for recognition in NRG communications and potential partnerships for collaboration to further reduce environmental impact. For example, NRG Business Solutions has renewable energy and low carbon services for commercial and industrial customers. Success is measured by tracking against our goal to receive CDP GHG disclosure from 50% of our major suppliers. In 2020 we received GHG data from 41% of major suppliers.

As part of this ongoing project corporate sustainability is working with the supply chain department to evaluate how to incorporate specific questions about environmental, social and governance indicators. Specifically for natural gas producers, NRG is working with the Natural Gas Supply Collaborative to engage natural gas producers on disclosing environmental and social indicators that would impact future purchasing decisions. While the culmination of the project is years away, the goal would be to award contracts to those natural gas companies that are taking action to reduce their climate impacts.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

35

% of customer - related Scope 3 emissions as reported in C6.5

10

Please explain the rationale for selecting this group of customers and scope of engagement

The percentage of customers engage varies by type of engagement. Due to the varying nature of the engagements within different NRG businesses the percentage of scope 3 emissions, business travel for customer engagement, are estimated

NRG's customers for these engagements include large commercial and industrial customers or residential customers and small businesses. NRG Retail provides energy and related services to residential, industrial and commercial consumers through various brands and sales channels across the U.S. The scope of the engagements vary from the publication of white papers and blogs on the NRG website, to speaking at conferences and consulting services on energy management. These are ongoing engagements across multiple businesses directed at customers. For details visit: https://www.nrg.com/insights/sustainability.html

Residential and small commercial (Mass Market) consumers make purchase decisions based on a variety of factors, including price, customer service, brand, product choices and value-added features. These consumers purchase products through a variety of sales channels, including direct sales, call centers, websites, brokers and brick-and mortar stores. Through its broad range of service offerings and value propositions, Retail is able to attract, retain, and increase the value of its customer relationships. Retail's brands are recognized for exemplary customer service, innovative smart energy and technology product offerings and environmentally friendly solutions.

Also included in Retail is NRG's Business Solutions group, which includes demand response, commodity sales, energy efficiency and energy management solutions. An integrated provider of supply and distributed energy resources, Business Solutions focuses on distributed products and services as businesses seek greater reliability, cleaner power or other benefits that they cannot obtain from the grid. These solutions include system power, distributed generation, solar and wind products, carbon management and specialty services, backup generation, storage and distributed solar, demand response and energy efficiency and advisory services. In providing on-site

energy solutions, NRG often benefits from its ability to supply energy products from its wholesale generation portfolio to commercial and industrial retail customers.

Impact of engagement, including measures of success

Engagement and measurement of success includes gathering and summarizing customer testimonials and case studies about their experiences with our sustainable products and services. One of the key themes of our 2020 Sustainability Report was empowering customers to choose cleaner energy products and services. In the Customers chapter of the Report, we provide a number of testimonials and case studies of customers who use our sustainable products and services (please see pages 38-55).

In 2020, the Compensation Committee of NRG's Board added Net Promoter Score (NPS) as a key performance indicator governing annual incentive compensation for Named Executive Officers (see page 53 of 2020 Proxy Statement). Called "Customer Focus Index", NPS measures the overall satisfaction of a customer with NRG's products and services as well as a customer's loyalty to NRG's brand, as determined through a customer survey. The NPS is an index ranging from -100 to 100. To calculate the NPS, detractors (those that score 6 or less out of 10) are subtracted from promoters (a score of 10 or 9). For example, if 50% of respondents to the survey are promoters and 10% are detractors, the NPS is 40%. In order to allow for the fact that NRG has multiple brands across multiple geographies and to account for NPS goals across those factors, goals are indexed into the single metric (the Customer Focus Index). The Company uses an external company to assess NPS scores, thereby ensuring objective, measurable results. As reported at NRG's recent Investor Day, NRG's NPS for its Home business ranges from 45-70, as compared to 10-15 for leading regulated utilities (please see page 33-34 of the presentation at https://investors.nrg.com/static-files/c40972f6-622c-437f-b625-111ab807e2ea).

We actively engage with customers on their sustainability goals and work to meet their needs through our products and services. For our Business customers, we have a product called Renewable Select, which allows businesses to deploy renewable energy without the need for onsite solar panels of their own or complicated and often risky contract structures (please see page 46-47 of 2020 Sustainability Report). We have found that our contracts with such customers have an average duration of 9 years compared to only 6 years for power customers overall (please see pages 55-56 of our Investor Day presentation).

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers

Trade associations

Funding research organizations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Clean energy generation	Support	NRG has engaged by meeting directly with policymakers in Washington and indirectly through groups such as the American Council on Renewable Energy (ACORE), the Renewable Energy Markets Association the US Partnership for Renewable Energy Finance (USPREF), the Electric Power Supply Association, and various informal organizations. NRG collaborates where possible with major environmental groups on clean energy and climate solutions. (NRDC, EDF, TNC, NWF).	NRG supports meaningful Congressional and regulatory actions to mitigate GHG emissions, and supports policies that foment the development and deployment of competitive low-carbon power generation technologies. To this end, NRG has actively engaged in EPA GHG rule development by working with other companies, the EPA and states to develop appropriate frameworks for use under section 111(d) of the Clean Air Act. Previously, NRG supported climate change legislation and incentives for clean energy solutions. NRG also engages with local and national environmental groups to seek feedback on new business initiatives and collaborate on ways to work together for the environment, such as through exclusive renewable energy product offerings for members.
Other, please specify GHG regulation	Support	NRG has engaged by meeting directly with policymakers in Washington and indirectly through groups such as the Electrification Coalition, which supports policies promoting electric vehicles, Resource for the Future, which conducts prominent economic studies on national climate policies; Princeton University Adglinger Center for Energy and the Environment, which develop solutions and inform policies through researches in engineering	NRG believes in economically efficient and innovation-driving policies to support competitive clean energy generation. NRG is an active thought leader on policies aimed at supporting both utility-scale renewables and customer-facing, distributed energy technologies like rooftop solar. NRG recognizes the benefits afforded by policies like the investment tax credit, retail net energy metering.

		and economics. Green Mountain Energy continues to support the future of clean energy and the smart grid as a sponsor and active participant in the nationally acclaimed Pecan Street Project. Pecan Street Inc. is a research and development organization focused on developing and testing advanced technology, business model and customer behavior surrounding advanced energy management systems.	

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Electric Power Supply Association (EPSA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

EPSA members support policies that give all suppliers an equal opportunity to compete and give all customers an equal opportunity to reap the benefits of competition. For more information, please go to http://www.epsa.org/about/.

How have you influenced, or are you attempting to influence their position?

NRG participates in meetings and conferences with trade groups and organizations similar to SEIA and EPGA to engage in dialogue on policy solutions.

Trade association

Solar Energy Industries Association (SEIA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The SEIA's mission is to ensure continued incentives for the deployment of solar technologies coupled with effective regulation of GHGs from existing power plants under Section 111(d) of the Clean Air Act. For more information please go to http://www.seia.org/

How have you influenced, or are you attempting to influence their position?

NRG participates in meetings and conferences with trade groups and organizations similar to SEIA and EPGA and engage in dialogue on policy solutions. NRG works through SEIA to generate support for government incentives, mandates and procurements that help grow the solar energy market.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

The development of all significant policy positions are coordinated through appropriate senior management. ensuring overall consistency with NRG's climate change management strategy. All NRG's policy positions that are published or disclosed go through a consistent review process involving NRG's Investor Relations, Legal, Marketing and Communication teams. The strategy is consistent across all business divisions and geographies.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

NRG 2021 Proxy Statement (FINAL)_.pdf

Page/Section reference

Pages 21-29

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

NRG Sustainability Report 2020_vF.pdf

Page/Section reference

All , 74-75

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C15. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Attached are the following documents that we deemed relevant to our organization's response to this year's CDP Water Report.
1. NRG 2020Sustainability Report
2. NRG 2021 Proxy Statement
3. NRG 2020 Auditor's GHG Report
4. NRG 2020 10-K

NRG 2020 Annual Report (FINAL).pdf

NRG 2021 Proxy Statement (FINAL)_.pdf

NRG Sustainability Report 2020_vF.pdf

NRG GHG Report FY20 v2.pdf

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	9,093,000,000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	6293775085

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

NRG's current scope 1 footprint comprises 99% of its total GHG inventory. We are currently assessing including additional scope 3 categories to build out a complete value chain assessment of our carbon footprint. Given NRG's business nature as a diversified retail and generation power company, it is difficult to assign specific emissions to vendors at this time.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

Please confirm below

I have read and accept the applicable Terms