2021 SUSTAINABILITY REPORT

SASB standards table

Click here to view our online 2021 Sustainability Report.

The mission of the Sustainability Accounting Standards Board (SASB), now known as The Value Reporting Foundation (VRF), is to develop sustainability metrics for public corporations to disclose material, decision-useful information to investors. NRG supports work that contributes directly to providing comparable and consistent data. The nature of our business directs us to consult the SASB Standards for Infrastructure Sector – Electric Utilities as defined by the VRF's Sustainable Industry Classification System (SICS).

Below is a table which contains those topics we have identified as key issues and against which we are able to report as a publicly traded company. Topics that are not applicable to NRG are denoted as such. Activity metrics that may assist in the accurate evaluation and comparability of disclosure may be found in NRG's 2021 Form 10-K, NRG's 2021 Proxy Statement, and in NRG's 2021 Sustainability Report. Quantitative data may be followed by narrative information that contextualizes the data table and is also responsive to any qualitative metrics.

Topic	Accounting Metric		SASB Code
Greenhouse Gas (GHG) Emissions & Energy Resource Planning	**(1) Gross Global Scope 1 Emissions (metric tons of CO_2e)**	36,557,416* *Includes 37.5% ownership of a 605 MW capacity coal plant in Australia. Reported greenhouse gas metrics include emission and consumption data from all facilities located in the United States that were owned, controlled, or for which the Company had an equity interest as of December 31, 2021. The Company employs a hybrid methodology of operational and financial control, as defined in the World Resources Institute / World Business Council for Sustainable Development *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, Revised Edition, 2004 (GHG Protocol), to determine facilities within the organizational boundary. Emissions and consumption data from jointly owned electric generating facilities are allocated based on the Company's equity share of ownership at the plant level. Note that tolling agreements are currently excluded from the organizational boundary.	IF-EU-110a.1
	(2) Percentage Covered under Emissions-Limiting Regulations, and	4%	
	(3) Percentage Covered under Emissions-Reporting Regulations	99.99%	
	Clarification of percentage covered under emissions-limiting and emissions-reporting regulations: Nearly all (>99%) of NRG's emission sources are subject to mandatory U.S. federal (Environmental Protection Agency (EPA)) greenhouse gas reporting regulations. In addition, some of these emission sources (4% specified under IF-EU-110a.1(2) above) also report to regional and state CO_2e reporting programs (RGGI, AB32) that are disclosed annually as part of NRG's financial reporting data.		

Topic	Accounting Metric		SASB Code
Greenhouse Gas (GHG) Emissions & Energy Resource Planning	**Discussion of accounting, estimations and uncertainty for Scope 1 Emissions:** Scope 1 includes only direct GHG emissions associated with fuel combustion in boilers, turbines, and engines used to produce electric power. Scope 1 GHG emissions were determined by using methods specified within Title 40, Chapter I, Subchapter C, Part 98, Subparts A, C and D of the Code of Federal Regulations. The determination of the equity share of GHG emissions is consistent with equity share methodologies for equity share accounting for greenhouse gas emissions as described in the GHG Protocol. GHG emissions from combustion of fossil fuels used for other activities or equipment, such as auxiliary boilers, starter engines, and company fleet vehicles are not included at this time as the associated emissions are immaterial. Scope 1 emissions do not include emissions from fugitive sources such as hydrofluorocarbon (HFC) releases from use of refrigeration and/or air conditioning equipment, sulfur hexafluoride (SF_6) from electrical equipment, and methane releases from natural gas transport.		**IF-EU-110a.1**
	GHG emissions associated with power deliveries	The calculation of this metric is under consideration.	**IF-EU-110a.2**
	Description of Long-term and Short-term Strategy or Plan to Manage Scope 1 Emissions, Emission-Reduction Targets, and an Analysis of Performance v. Those Targets	NRG's goal is to reduce its U.S. Scope 1, 2, and 3 (business travel) CO_2e emissions 50% by 2025, from the current 2014 baseline, and achieve net-zero by 2050. From 2014-2021 our emissions decreased 44%. Disclosure of our strategy to manage Scope 1 emissions is reported annually through the CDP Climate Change questionnaire as well as in NRG's 2020 Task Force on Climate-related Financial Disclosures (TCFD) Report and NRG's Sustainability Linked Bond Framework.	**IF-EU-110a.3**
	Number of customers served in markets subject to renewable portfolio standards (RPS) and percentage fulfillment of RPS target by market	The calculation of this metric is under consideration.	**IF-EU-110a.4**

Air Quality	**Air emissions source**	**Air emissions** (metric tons)	**Percentage from production facilities within urbanized areas**	**IF-EU-120a.1**
	NO_x	16,089	36%	
	SO_x	39,234	78%	
	PM_{10}*	2,793	58%	
	Pb**	0.232	27%	
	Hg**	0.075	36%	
	Discussion of accounting, estimations, and uncertainty for Air Emissions: Data collection varies based on the generation facility and may includes engineering calculations and/or continuous emissions monitoring systems (CEMS). * The requirement to report PM_{10} emissions in annual emissions inventories or emissions statements varies between states. In addition, the earliest reporting deadline for a reporting year is July 1st of the following year. For sites in NRG's fleet that have not yet or are not required to report PM_{10} emissions at the time of submittal to SASB, NRG has used the U.S. EPA's AP-42 emission factors to estimate emissions. ** In the case of lead and mercury emissions, volumes are estimated for some facilities due to incomplete data at time of publication.			

<table>
<tr><th>Topic</th><th colspan="4">Accounting Metric</th><th>SASB Code</th></tr>
<tr><td rowspan="11">Water Management</td><td rowspan="6">(1) Total Water Withdrawn (thousands of cubic meters)</td><td colspan="3">2,937,669</td><td rowspan="11">IF-EU-140a.1</td></tr>
<tr><td colspan="3">2021 NRG GLOBAL WATER WITHDRAWN BY SOURCE</td></tr>
<tr><td>Water Source</td><td>Total (Thousands of Cubic Meters)</td><td>Percent</td></tr>
<tr><td>Fresh Water</td><td>1,863,100</td><td>63%</td></tr>
<tr><td>Non-Fresh Water</td><td>522,489</td><td>18%</td></tr>
<tr><td>Ocean</td><td>552,081</td><td>19%</td></tr>
<tr><td>Total</td><td>2,937,669</td><td>100%</td></tr>
<tr><td>(2) Total Water Consumed (thousands of cubic meters)</td><td colspan="3">151,647</td></tr>
<tr><td rowspan="6">Percentage of Each in Regions with High or Extremely High Baseline Water Stress</td><td>Baseline Water Stress High (40-80%) or Extremely High (>80%)</td><td>Withdrawal from areas with High or Extremely High Baseline Water Stress</td><td>Consumption from areas with High or Extremely High Baseline Water Stress</td></tr>
<tr><td>Percent of Total Water</td><td>2%</td><td>36%</td></tr>
<tr><td>Percent that is Non-Fresh*</td><td><1%</td><td><1%</td></tr>
<tr><td colspan="3">NRG uses the WRI Aqueduct tool to model and help assess water basin risks in combination with regional internal expertise.
*Non-Fresh water has a total dissolved solids greater than 1,000 mg/l and is not used for agriculture or municipal water supply.</td></tr>
<tr><td>Type of Generating Facility in Baseline Water Stress Area</td><td colspan="2">Number</td></tr>
<tr><td>Fossil Fuel (Natural Gas, Coal, Oil)</td><td colspan="2">1</td></tr>
<tr><td>Renewable (Solar and Wind)</td><td colspan="2">0</td></tr>
<tr><td>Nuclear</td><td colspan="2">1</td></tr>
<tr><td>Thermal (District Heating and Cooling)</td><td colspan="2">0</td></tr>
<tr><td>Total</td><td colspan="2">2</td></tr>
<tr><td>Number of Incidents of Non-Compliance with Water-Quality and/or Quantity Permits, Standards, and Regulations</td><td colspan="3">0</td><td>IF-EU-140a.2</td></tr>
<tr><td colspan="4">Discussion of Water Management Risks
NRG's definition of substantive risk from water is the possibility that an event will occur and significantly affect the achievement of NRG's business goals. Risk identification and assessment process applies to both direct operations and supply chain. NRG uses measures, metrics and indicators for water risk assessment leveraging management and professional judgment from the following perspectives:
• Financial impact
- Corporate earnings
- Capital expenditure on technologies to reduce water consumption and withdrawal
• Plant operation
- Operation disruption due to shortage
- Increase in water cost
- Supply chain risk
• Environmental impact
- Availability
- Quality of river basins
- Regulations that impact supply and/or management of water</td><td>IF-EU-140a.3</td></tr>
</table>

Topic	Accounting Metric	SASB Code
Water Management	**Discussion of strategies and practices to mitigate risks** Water risk is monitored by the risk owners (individual plant operators) and reported to management upon material changes with a threshold of 20% in water consumption and withdrawal levels. If determined that a water supply risk exists that could impact projected generation levels at any plant within a two year time frame, risk mitigation efforts are identified and economically evaluated for implementation. NRG Plant Operations team reviews modeling scenarios generated. Plant water usage is reviewed annually. Analysis is reviewed by the senior leaders of NRG's Operations, Engineering and Commercial Operations teams. WRI Aqueduct tool is used annually to develop a high level view of basin level risk that informs strategic decision-making and the setting of goals and targets. This tool was chosen because of its open source nature and ease of use. Each generating facility is unique and the water risk approach identifies and addresses risks for each covering: •Availability •Quality •Regulatory •Stakeholders •Supply chain impacts •Financial •Operational •Environmental Risk response decisions are primarily made and executed by managing plant operations to maintain compliance with all regulations. NRG reports supply chain water risk annually through the CDP Water Risk Questionnaire.	**IF-EU-140a.3**

Coal Ash Management	**Amount of Coal Combustion Residuals Generated (metric tons rounded to nearest thousand)**	1,179,000					**IF-EU-150a.1**
	Percentage Recycled (metric tons rounded to nearest thousand)	72% (853,000)					
	Total Number of Coal Combustion Residual Impoundments	11 surface impoundments as defined by 40 CFR 257.2					**IF-EU-150a.2**
	Number by EPA Hazard Potential Classification, Broken Down by EPA Structural Integrity Assessment	NRG Impoundment Structural Integrity Rating and Hazard Potential Classification					
			Less than Low	Low	Significant	High	Incised*
		Satisfactory	0	1	5	0	0
		Fair	0	0	0	0	0
		Poor	0	0	0	0	0
		Unsatisfactory	0	0	0	0	0
		Not Applicable*	0	1	2	0	2
		*To align with EPA reporting we have added a column for 'Incised' and a row for 'Not Applicable' to account for all impoundments as defined by the EPA.					

Topic	Accounting Metric			SASB Code
Workforce Health & Safety	**(1) Total Recordable Injury Rate**	0.30		
	(2) Fatality Rate	0		
	(3) Near-Miss Frequency Rate	22.31 Process for classifying, recording and reporting: *# of Near Misses Reported / Total Hours Worked X 1,000,000 = Near-Miss Frequency Rate* The National Safety Agency defined near misses as "an unplanned event that did not result in injury, illness, or damage, but had the potential to do so." NRG uses an electronic Incident Management System to document, communicate, track, and trend specific factors about each event including causal factors and corrective actions; this system provides automated fleet-wide notifications. The number of near-misses is derived from a report pulled from the Incident Management System. NRG's Operational Health and Safety (OHS) management system applies to 100% of U.S. operations. The system also includes notifications to executive management when significant safety events occur that meet the defined criteria for a Significant Event notification. The system also generates weekly reports to communicate any events from the previous week to NRG personnel.		**IF-EU-320a.1**

Topic	Accounting Metric				SASB Code
Nuclear Safety & Emergency Management	**Total Number of Nuclear Power Units, Broken Down by Nuclear Regulatory Commission (NRC) Action Matrix Column**	NRG South Texas Project LP (STP) is a 44% owner of a joint undivided interest in STP.			**IF-EU-540a.1**
		Reactor Unit	**Action Matrix Column**	**Current Regulatory Oversight**	
		South Texas Project 1	Licensee Response	Baseline inspection	
		South Texas Project 2	Licensee Response	Baseline inspection	
		Table source: https://www.nrc.gov/reactors/operating/oversight/actionmatrix-summary.html			
	Discussion of Efforts to Manage Nuclear Safety and Emergency Preparedness	As a holder of an ownership interest in STP, NRG South Texas Project LP is an NRC licensee and is subject to NRC regulation. The NRC license gives NRG the right only to possess an interest in STP but not to operate it. As a possession-only licensee, i.e., non-operating co-owner, the NRC's regulation of NRG South Texas Project LP is primarily focused on NRG's ability to meet its financial and decommissioning funding assurance obligations. In connection with the NRC license, NRG and its subsidiaries have a support agreement to provide up to $120 million to support operations at STP.			**IF-EU-540a.2**

Topic	Accounting Metric		SASB Code
Management of the Legal & Regulatory Environment	**Discussion of Positions on the Regulatory and Political Environment Related to Environmental and Social Factors and Description of Efforts to Manage Risks and Opportunities Presented**	A discussion of risks can be found in the 2021 10-K SEC filing, Item 1-A, Risk Factors Related to NRG Energy, Inc., pages 24-37. Throughout 2021, we continued to engage with policymakers in Washington, D.C. and at the state level. We also maintained our relationships with groups such as the Electric Power Supply Association and various informal organizations. When possible, we collaborate with major environmental groups on clean energy access and climate solutions. Typically, we engage on legislative and regulatory actions designed to mitigate GHG emissions, as well as policies that support the development and deployment of competitive low-carbon power generation technologies. We are most active in the debate aimed at protecting and expanding competitive power markets and consumer choice, both of which we believe are critical enablers of achieving least-cost low-carbon outcomes. This year, we evaluated the climate positions of certain membership organizations to which we belong. We believe that either (i) they were in alignment with the Paris Climate Agreement or (ii) did not have a climate position. Our assessment was published in our inaugural Industry Association Climate Review which we will update annually.[1] Regulatory filings, white papers, presentations, and other materials that NRG has prepared and submitted setting forth NRG's positions on a variety of critical subjects driving our business and the industry can be found at http://www.nrg.com/company/energy-policy/. [1] To be included in the scope of our review, organizations received annual dues of $25,000 or more from NRG in 2021 and were registered to lobby at state or federal levels, or did, in fact, engage in such lobbying.	**IF101-21**

The following SASB topics and corresponding activity metrics are not applicable to NRG.

- Energy Affordability (IF-EU-240a. 1 through IF-EU-240a.4)
  - This topic pertains to regulated electric utilities, and NRG is not a regulated utility.
- End-Use Efficiency & Demand (IF-EU-420a. 1 through IF-EU-420a.3)
  - This topic pertains to regulated electric utilities, and NRG is not a regulated utility.
- Grid Resiliency (IF-EU-550a. 1 through IF-EU-550a.2)
  - NRG does not have transmission and distribution operations.