2018 – SASB Standards Table

SASB ALLIANCE
ORGANIZATIONAL MEMBER

The Sustainability Accounting Standards Board's (SASB) mission is to develop sustainability metrics for public corporations to disclose material, decision-useful information to investors. We support work that contributes directly to generating comparable and consistent data. The nature of our business directs us to consult the Infrastructure Sector – Electric Utilities & Power Generators. Below is a table which contains those topics we have identified as key issues and against which we are able to report on as a publicly traded company. Activity metrics that may assist in the accurate evaluation and comparability of disclosure may be found in NRG's 2018 Form 10-K and in NRG's 2018 Sustainability Report. Quantitative data may be followed by narrative information that contextualizes the data table and is also responsive to any qualitative metrics. For more details on our report process please visit **Our Approach to Reporting** in the 2018 Sustainability Report.

Sustainability Disclosure Topics and Accounting Metrics

SASB code	Accounting metric	2018
Greenhouse gas emissions and energy resource planning		
IF0101-01	**(1) Gross global scope 1 emissions (million metric tons)**	46,000,000* *Rounded to nearest million. Includes 37.5% ownership of 144MW capacity natural gas plant in Turkey and 80% of a 605MW capacity coal plant in Australia. Generation includes equity-owned plants as of Dec. 31, 2018.
	(2) Percentage covered under emissions-limiting regulations, and	8%
	(3) Percentage covered under emissions-reporting regulations	99.99%
	Clarification of percentage covered under emissions-limiting and emissions-reporting regulations: A significant majority (>99%) of NRG's emission sources are subject to mandatory federal (USEPA) greenhouse gas reporting regulations. In addition, some of these emission sources (18% specified under IF0101-01(2) above) also report to regional and state CO2e reporting programs that are disclosed annually as part of NRG's financial reporting data (RGGI, AB32).	
	Discussion of accounting, estimations and uncertainty for scope 1 emissions: Scope 1 includes only direct GHG emissions associated with fuel combustion in boilers, turbines and engines used for the production of wholesale electric power. The Scope 1 GHG emissions were determined by using methods specified within Title 40, Chapter I, Subchapter C, Part 98, Subparts A, C and D of the Code of Federal Regulations. The determination of the equity share of GHG emissions is consistent with equity share methodologies for equity share accounting for greenhouse gas emissions as described in GHG Protocol: A Corporate Accounting and Reporting Standard, Revised Edition. GHG emissions from combustion of fossil fuels used for other activities or equipment, such as auxiliary boilers, starter engines, mobile sources and offices is not included and was estimated to represent under 0.25% of the reported Scope 1 emissions. The Scope 1 emissions do not include emissions from fugitive sources such as hydro fluorocarbon releases from use of refrigeration and/or air conditioning equipment, sulfur hexafluoride (SF6) from electrical equipment and methane releases from natural gas transport.	
TA11-06-01	**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**	There are four levers within our control to reduce our GHG emissions and meet our science-based climate targets: 1) Retiring uneconomic units 2) Switching from coal to gas 3) Running existing plants less often 4) Carbon capture and sequestration. NRG's goal is to reduce its total U.S. Scope 1, 2 and 3 (business travel) CO2e emissions 50% by 2030, and 90% by 2050, using 2014 as a baseline. From 2017 to 2018, NRG's CO2e emissions decreased from 47 million metric tons to approximately 46 million metric tons, representing a 2% reduction year over year and 73% of the way to our 2030 goal. This puts us on track to meet our science-based targets ahead of schedule.

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Air quality			
IF0101-04	**Air emissions source**	**Air emissions** (metric tons)	**Percentage from production facilities within urbanized areas**
	NOx	22,510	7%
	SOx	61,430	35%
	PM10*	2,300	67%
	Pb**	.24	22%
	Hg***	.14	8%
	Discussion of accounting, estimations and uncertainty for air emissions: *The requirement to report PM10 emissions in annual emissions inventories or emissions statements varies between states. In addition, the earliest reporting deadline for a reporting year is April 1st of the following year. For sites in NRG's fleet that have not yet or are not required to report PM10 emissions at the time of submittal to SASB, NRG has used USEPA's AP-42 emission factors to estimate emissions. ** In the case of lead emissions, volumes are estimated for some facilities due to incomplete data at time of publication. ***In the case of mercury emissions, volumes are estimated for some facilities due to incomplete data at time of publication.		
Water management			
IF0101-05	**(1) Total water withdrawn (thousands of cubic meters)**	4,575,000	
		2018 NRG water withdraw by source	
		Water source	**Total (thousands of cubic meters)** / **Percent**
		Fresh water	2,434,000 / 53%
		Non-fresh water	1,092,000 / 24%
		Ocean	1,049,000 / 23%
		Total	4,575,000 / 100%
	(2) Total water consumed (thousands of cubic meters)	185,000	
	Percentage of each in regions with high or extremely high baseline water stress	**Baseline water stress high (40-80%) extremely high (>80%)**	**Withdrawal from areas with high or extremely high baseline water stress** / **Consumption from areas with high or extremely high baseline water stress**
		Percent of total water	39% / 45%
		Percent that is non-fresh*	18% / .04%
		*Non-fresh water has a total dissolved solids greater than 1000 mg/l and is not used for agriculture or municipal water supply. NRG uses the WRI Aqueduct and the WWF Water Risk Tool to model and help assess water basin risks in combination with regional internal expertise.	
		Type of generating facility in baseline water stress area	**Number**
		Fossil fuel (natural gas, coal, oil)	13
		Renewable (solar and wind)	0
		Nuclear	1
		Thermal (district heating and cooling)	0
		Total	14

<table>
<tr><th>SASB code</th><th>Accounting metric</th><th>2018</th></tr>
<tr><td colspan="3">Water management (continued)</td></tr>
<tr><td>TA11-02-01</td><td>Number of incidents of non-compliance with water-quality and/or quantity permits, standards and regulations</td><td>9</td></tr>
<tr><td rowspan="2">IF0101-07</td><td colspan="2">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 the measures, metrics and indicators for water risk assessment leveraging the 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 water shortage
◦ Increase in costs of water usage
◦ Supply chain risk
• Environmental impact
◦ Water availability
◦ Water quality of river basins
◦ Regulations that impact supply and/or management of water</td></tr>
<tr><td colspan="2">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 Ops reviews modelling scenarios generated. Plant water usage is reviewed annually. Analysis is reviewed by the senior leaders of NRG Operations, Engineering and Commercial Operations. 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. 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 identifies, assesses, and responds to supply chain water risk through CDP Water.</td></tr>
<tr><td colspan="3">Coal ash management</td></tr>
<tr><td rowspan="2">IF0101-08</td><td>Amount of coal combustion residuals generated (metric tons)</td><td>1,300,000</td></tr>
<tr><td>Percentage recycled (metric tons)</td><td>63% (875,000)</td></tr>
<tr><td rowspan="3">IF0101-09</td><td>Total number of coal combustion residuals impoundments</td><td>14 surface impoundments as defined by 40 CFR 257.2.</td></tr>
<tr><td>Number by EPA hazard potential classification, broken down by EPA structural integrity assessment</td><td>NRG impoundment structural integrity rating and hazard potential classification
<table>
<tr><th></th><th>Less than low</th><th>Low</th><th>Significant</th><th>High</th><th>Incised**</th></tr>
<tr><td>Satisfactory</td><td>0</td><td>4</td><td>5</td><td>0</td><td>0</td></tr>
<tr><td>Fair</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Poor</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Unsatisfactory</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Not applicable</td><td>0</td><td>1</td><td>2</td><td>0</td><td>2</td></tr>
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*The safety factor assessment was not performed for the Former Ash Pond at Powerton due to lack of necessary information because of the construction age of the impoundment. The inactive impoundment will be closed in accordance with 40 CFR 257.101 and 257.102.
**To align with EPA reporting we have added a column for 'Incised' and a row 'Not applicable' to account for all impoundments as defined by the EPA.</td></tr>
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<tr><th>SASB code</th><th>Accounting metric</th><th>2018</th></tr>
<tr><td colspan="3">Workforce health and safety</td></tr>
<tr><td rowspan="3">IF0101-12</td><td>(1) Total recordable injury rate</td><td>0.51</td></tr>
<tr><td>(2) Fatality rate</td><td>0</td></tr>
<tr><td>(3) Near miss frequency rate</td><td>39.07
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 utilizes 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 was derived from a report pulled from the incident management system. NRG’s 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 previous weeks’ event to NRG personnel.</td></tr>
<tr><td colspan="3">Nuclear safety and emergency management</td></tr>
<tr><td rowspan="4">IF0101-15</td><td rowspan="4">Total number of nuclear power units, broken down by nuclear regulatory commission action matrix column</td><td>NRG South Texas LP is a 44% owner of a joint undivided interest in STP.</td></tr>
<tr><td>
<table>
<tr><th>Reactor unit</th><th>Action matrix column</th><th>Current regulatory oversight</th></tr>
<tr><td>South Texas 1</td><td>Licensee Response</td><td>Baseline inspection</td></tr>
<tr><td>South Texas 2</td><td>Licensee Response</td><td>Baseline inspection</td></tr>
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</td></tr>
<tr><td>Table source: https://www.nrc.gov/reactors/operating/oversight/actionmatrix-summary.html#r_4 as of March 2019</td></tr>
<tr><td>IF0101-16</td><td>Discussion of efforts to manage nuclear safety and emergency preparedness</td><td>As a holder of an ownership interest in STP, NRG South Texas LP is an NRC licensee and is subject to NRC regulation. The NRC license gives NRG the right only to possess an interest in STP but not to operate it. As a possession-only licensee, i.e., non-operating co-owner, the NRC’s regulation of NRG South Texas LP is primarily focused on NRG’s ability to meet its financial and decommissioning funding assurance obligations. In connection with the NRC license, NRG and its subsidiaries have a support agreement to provide up to $120 million to support operations at STP.</td></tr>
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