



# 2019 SASB STANDARDS TABLE

The Sustainability Accounting Standards Board (SASB) has developed industry-specific sustainability metrics for corporations to disclose material, decision-useful information to investors. Vistra's SASB disclosures for the Infrastructure Sector – Electric Utilities & Power Generators are outlined in the table below.

TOPIC	SASB CODE	ACCOUNTING METRIC	2019 DISCLOSURE																		
Greenhouse Gas Emissions and Energy Resource Planning	IF-EU-110a.1	(1) Gross global scope 1 emissions	105,523,364 metric tons of CO <sub>2</sub> e Emissions are equity adjusted for partial ownership of certain power plants consistent with equity share methodologies as described in GHG Protocol: A Corporate Accounting and Reporting Standard, Revised Edition.																		
		(2) Percentage covered under emissions-limiting regulations	9%																		
		(3) Percentage covered under emissions-reporting regulations	99.99% All of Vistra's power plant facilities report under the EPA mandatory reporting program with the exception of two sites in 2019 whose emissions were insignificant.																		
	IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Vistra announced emissions reduction targets in October of 2019 for its Scope 1 emissions. Vistra's goal is to achieve a 50% reduction in CO <sub>2</sub> e emissions by 2030 and an 80% reduction in CO <sub>2</sub> e emissions by 2050, each as compared to a 2010 baseline. Vistra has an aspiration to achieve net-zero carbon emissions by 2050 if advancements in technology, market constructs, and public policy are supportive. We expect progress towards these goals will include incremental thermal asset retirements, continued investment in solar and battery storage, and the monitoring and potential deployment of new technologies. As of Dec. 31, 2019, Vistra reduced its CO <sub>2</sub> e emissions by 39% compared to a 2010 baseline—achieving nearly 78% of Vistra's 2030 emissions reduction goal.																		
IF-EU-110a.4	(1) Number of customers served in markets subject to renewable portfolio standards (RPS)	Vistra operates in retail electric markets that are competitive, allowing the customer to choose the retail electric provider and plan for their electricity needs. Vistra retail offers numerous renewable product offerings if the customer desires to purchase a renewable electricity plan. As of Dec. 31, 2019, of Vistra's -4.6 million customers, 99.8% of them are in states that have an RPS in place.																			
	(2) Percentage fulfillment of RPS target by market																				
Air Quality	IF-EU-120a.1	Air emissions of the following pollutants: (1) NO <sub>x</sub> (excluding N <sub>2</sub> O), (2) SO <sub>x</sub> , (3) particulate matter (PM <sub>10</sub> ), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Emissions (metric tons)</th> <th>% in or near areas of dense populations</th> </tr> </thead> <tbody> <tr> <td>NO<sub>x</sub></td> <td>52,610<sup>1</sup></td> <td>75%</td> </tr> <tr> <td>SO<sub>x</sub></td> <td>105,743</td> <td>81%</td> </tr> <tr> <td>PM<sub>10</sub></td> <td>5,356</td> <td>67%</td> </tr> <tr> <td>Pb</td> <td>0.44</td> <td>64%</td> </tr> <tr> <td>Hg</td> <td>0.47</td> <td>65%</td> </tr> </tbody> </table> <p><sup>1</sup> Includes N<sub>2</sub>O</p>	Pollutant	Emissions (metric tons)	% in or near areas of dense populations	NO <sub>x</sub>	52,610 <sup>1</sup>	75%	SO <sub>x</sub>	105,743	81%	PM <sub>10</sub>	5,356	67%	Pb	0.44	64%	Hg	0.47	65%
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Water Management	IF-EU-140a.1	(1) Total water withdrawn, percentage in regions with High or Extremely High Baseline Water Stress	<table border="1"> <thead> <tr> <th colspan="2">2019 Total Water Withdrawn</th> </tr> <tr> <th>Water Source</th> <th>Total (MegaLiters)</th> </tr> </thead> <tbody> <tr> <td>Groundwater</td> <td>430,207</td> </tr> <tr> <td>Surface Water</td> <td>13,072,635</td> </tr> <tr> <td>Sea Water</td> <td>325,989</td> </tr> <tr> <td>Third Party</td> <td>113,751</td> </tr> <tr> <td>Produced</td> <td>32</td> </tr> <tr> <td>Total</td> <td>13,942,614</td> </tr> </tbody> </table> <p>Vistra operates five power plants in areas identified as "High Stress" or "Extremely High Stress." These five plants represent 0.05% of total water withdrawn. See SASB disclosure IF-EU-140a.3 for further discussion.</p>	2019 Total Water Withdrawn		Water Source	Total (MegaLiters)	Groundwater	430,207	Surface Water	13,072,635	Sea Water	325,989	Third Party	113,751	Produced	32	Total	13,942,614		
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Water Management (continued)		(2) Total water consumed, percentage in regions with High or Extremely High Baseline Water Stress	<table border="1"> <thead> <tr> <th colspan="2">2019 Total Water Consumed</th> </tr> <tr> <th>Water Source</th> <th>Total (MegaLiters)</th> </tr> </thead> <tbody> <tr> <td>Groundwater</td> <td>4,831</td> </tr> <tr> <td>Surface Water</td> <td>243,867</td> </tr> <tr> <td>Sea Water</td> <td>-</td> </tr> <tr> <td>Third Party</td> <td>29,716</td> </tr> <tr> <td>Produced</td> <td>32</td> </tr> <tr> <td>Total</td> <td>278,446</td> </tr> </tbody> </table> <p>Substantially all of our water withdrawn is not consumed, rather it is returned to its source or recycled.</p> <p>Vistra operates five power plants in areas identified as "High Stress" or "Extremely High Stress." These five plants represent 2.6% of water consumed. See SASB disclosure IF-EU-140a.3 for further discussion.</p>	2019 Total Water Consumed		Water Source	Total (MegaLiters)	Groundwater	4,831	Surface Water	243,867	Sea Water	-	Third Party	29,716	Produced	32	Total	278,446
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	IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	No material fines or violations in 2019.																
	IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	<p>Water is a limited, expensive, and shared resource that is essential to Vistra's plant operations. Producing electricity utilizes water in several key functions such as producing steam, condensing steam, cooling equipment, pollution control equipment, and in some circumstances, boiler make-up, potable water, cleaning and other uses. Therefore, water conservation is a primary concern at each of our generating facilities, especially those in high water stress areas.</p> <p>Though many of our plants are geographically situated in an area of ample water supply, Vistra practices environmental stewardship and works to efficiently use water. Where appropriate, we have built large reservoirs to capture water when it is plentiful, allowing it to be reused/recycled repeatedly. When feasible, we find ways to recycle water, to reuse water from one system to another system to reduce our use of freshwater, and to reclaim other types of wastewaters. In fact, Vistra plants only consume 2% of water withdrawn. We are also exploring new ways to maximize water resources and new technologies including wind power, solar power, and combined cycle generation.</p> <p>Vistra has five efficient natural gas fueled generating sites in areas identified as "High Stress" or "Extremely High Stress" in Texas. They are located in regions of the state that are either typically arid, historically susceptible to drought, and/or experiencing higher electricity demands due to significant business development and population growth in the state. Each of these highly efficient natural gas plants utilizes low water demand and has its own site-specific conservation measures: Two have extremely low water demand, one operates as a zero discharge facility, another uses reclaimed water as its primary source, and the last one utilizes low quality water with significant treatment, is able to recycle extensively, and then discharges to a facility that continues to recycle the same water.</p>																
Coal Ash Management	IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated (metric tons)	5,177,948																
		Percentage recycled (metric tons)	63%																
	IF-EU-150a.2	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	Vistra has a total of 30 impoundments classified as follows by hazard potential classification: 8 Low, 8 High and 14 Significant. Vistra complies with the US EPA Coal Combustion Residuals (CCR) requirements and reports are publicly available on Luminant's <a href="#">website</a> .																
Workforce Health & Safety	IF-EU-320a.1	(1) Total recordable incident rate (TRIR)	1.05																
		(2) Fatality rate	0.02																
		(3) Near miss rate	4.7																
			All rates are calculated by multiplying the events by 200,000 and dividing by actual worked hours. Near Miss Events are defined by Vistra to be an unplanned event that did not result in any injury, illness or property damage. The near miss rate was calculated from 261 near miss events for 2019.																

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Nuclear Safety & Emergency Management	IF-EU-540a.1	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	<table border="1"> <thead> <tr> <th>Reactor Unit</th> <th>Action Matrix Column</th> </tr> </thead> <tbody> <tr> <td>Comanche Peak 1</td> <td>Licensee Response</td> </tr> <tr> <td>Comanche Peak 2</td> <td>Licensee Response</td> </tr> </tbody> </table> <p>This information is available on the NRC's website <a href="#">here</a>.</p>	Reactor Unit	Action Matrix Column	Comanche Peak 1	Licensee Response	Comanche Peak 2	Licensee Response																	
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IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	Safety is Vistra's top priority. As a commercial nuclear plant operator, we are licensed by the US NRC. We must comply and follow NRC regulations and programs regarding nuclear operations including their <a href="#">safety culture principles</a> . Vistra's power plant, Comanche Peak, publishes its own emergency <a href="#">information website</a> for the public. In addition, oversight by the Nuclear Oversight Advisory Board (NOAB) ensures routine, periodic independent oversight of nuclear plant performance, including safety metrics.																								
Activity Metric	IF-EU-000.A	Number of residential customers served	Vistra serves 4,595,000 retail customers as of December 2019. This number is representative of RCE's or residential customer equivalent. A single RCE represents 1,000 therms of natural gas or 10,000 kWh of electricity.																							
		Number of commercial customers served																								
		Number of industrial customers served																								
	IF-EU-000.B	Total electricity delivered to residential customers	Vistra delivered 77,600 GWh of power to its retail electric customers.																							
		Total electricity delivered to commercial customers																								
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		Total electricity delivered to all other retail customers																								
Percentage of wholesale customers																										
IF-EU-000.D	Total electricity generated, percentage of electricity generated by major energy source, percentage in regulated markets	<table border="1"> <thead> <tr> <th colspan="3">2019 Total Electricity Generated</th> </tr> <tr> <th>Fuel</th> <th>MWh</th> <th>% of Total</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>66,466,972</td> <td>35.7%</td> </tr> <tr> <td>Gas</td> <td>100,215,277</td> <td>53.8%</td> </tr> <tr> <td>Nuclear</td> <td>19,304,817</td> <td>10.4%</td> </tr> <tr> <td>Oil</td> <td>2,755</td> <td>0.0%</td> </tr> <tr> <td>Solar</td> <td>438,784</td> <td>0.2%</td> </tr> <tr> <td>Total</td> <td>186,428,605</td> <td></td> </tr> </tbody> </table> <p>0% of electricity is generated in regulated markets.</p>	2019 Total Electricity Generated			Fuel	MWh	% of Total	Coal	66,466,972	35.7%	Gas	100,215,277	53.8%	Nuclear	19,304,817	10.4%	Oil	2,755	0.0%	Solar	438,784	0.2%	Total	186,428,605	
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IF-EU-000.E	Total wholesale electricity purchased	2,334 GWh with over 50% attributed to wind purchases.																								