## Vistra Corp. - Climate Change 2020



## C0.1

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

Vistra (NYSE: VST) is a leading, Fortune 275 integrated retail electricity and power generation company based in Irving, TX, providing essential resources for customers, commerce, and communities. Vistra combines an innovative, customer-centric approach to retail with safe, reliable, diverse, and efficient power generation. The company brings its products and services to market in 20 states and the District of Columbia, including six of the seven competitive wholesale markets in the U.S. and markets in Canada and Japan, as well. Serving nearly 5 million residential, commercial, and industrial retail customers with electricity and natural gas, Vistra is the largest competitive residential electricity provider in the country and offers over 50 renewable energy plans. The company is also the largest competitive power generator in the U.S. with a capacity of approximately 39,000 megawatts powered by a diverse portfolio, including natural gas, nuclear, solar, and battery energy storage facilities. In addition, the company is a large purchaser of wind power. The company is currently constructing a 400-MW/1,600-MWh battery energy storage system in Moss Landing, CA, which will be the largest of its kind in the world when it comes online. Vistra is guided by four core principles: we do business the right way, we work as a team, we compete to win, and we care about our stakeholders, including our customers, our communities where we work and live, our employees, and our investors.

The information presented herein includes forward-looking statements (FLS) within the meaning of the Private Securities Litigation Reform Act of 1995. These FLS, which are based on current expectations, estimates and projections about the industry and markets in which Vistra operates and beliefs of and assumptions made by Vistra's management, involve risks and uncertainties, which are difficult to predict and are not guarantees of future performance, that could significantly affect the financial results of Vistra. All statements, other than statements of historical facts, that are presented herein, or in response to questions or otherwise, that address activities, events of developments that may occur in the future, including such matters as activities related to our financial or operational projections, the potential impacts of the COVID-19 pandemic on our business, capital allocation, capital expenditures, liquidity, business and sustainability strategy, competitive strengths, goals, future acquisitions or dispositions, development or operation of power generation assets, market and industry developments and the growth of our businesses and operations (often, but not always, through the use of words or phrases, or the negative variations of those words or other comparable words of a future or forward-looking nature, including, but not limited to: "intends," "plans," "will likely," "unlikely," "believe," "confident", "expect," "seek," "anticipate," "estimate," "continue," "will," "shall," "should," "could," "may," "might," "predict," "project," "forecast," "target," "potential," "goal," "objective," "guidance" and "outlook"), are FLS. Readers are cautioned not to place undue reliance on FLS. Although Vistra believes that in making any such FLS, Vistra's expectations are based on reasonable assumptions, any such FLS involves uncertainties and risks that could cause results to differ materially from those projected in or implied by any such FLS, including, but not limited to: (i) adverse changes in general economic or market conditions (including changes in interest rates) or changes in political conditions or federal or state laws and regulations; (ii) the ability of Vistra to execute upon the contemplated strategic and performance initiatives and to successfully integrate acquired businesses; (iii) actions by credit ratings agencies; (iv) the severity, magnitude and duration of pandemics, including the COVID-19 pandemic, and the resulting effects on our results of operations, financial condition and cash flows; and (v) those additional risks and factors discussed in reports filed with the Securities and Exchange Commission by Vistra from time to time, including the uncertainties and risks discussed in the sections entitled "Risk Factors" and "Forward-Looking Statements" in Vistra's annual report on Form 10-K for the year ended Dec. 31, 2019 and any subsequently filed quarterly reports on Form 10-Q. Any FLS speaks only at the date on which it is made, and except as may be required by law, Vistra will not undertake any obligation to update any FLS to reflect events or circumstances after the date on which it is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible to predict all of them; nor can Vistra assess the impact of each such factor or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any FLS

## 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	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2019	December 31 2019	Yes	2 years

## C0.3

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

## 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	Please explain
individual(s)	
Board-level	In July 2019, Vistra enhanced the governance over the company's sustainability policies and practices by expanding the responsibility of the former Risk Committee to include sustainability oversight.
committee	The Risk Committee was renamed the Sustainability and Risk Committee, which now oversees the company's assessment of greenhouse gas-related risks, including risks related to climate change,
	in addition to its prior oversight of the company's risk management process for the identification, evaluation, and mitigation of enterprise risk. The Sustainability and Risk Committee is comprised of
	three independent directors. The Committee Charter can be found at: https://www.vistracorp.com/wp-content/uploads/2020/07/Sustainability-Risk-Committee-Charter-2020-07-02.pdf

## 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	Scope of board- level oversight	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 Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<not Applicabl e&gt;</not 	Sustainability and climate-related issues are discussed at each scheduled quarterly Sustainability and Risk Committee, as denoted in their charter, reviews strategy, policies and practices related to sustainability as well as reviews and oversees both enterprise risk management and climate risks. The full board annually reviews business plans, the annual budget, major capital expenditures, and performance objectives.

## 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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	<not Applicable&gt;</not 	Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than quarterly
Chief Executive Officer (CEO)	<not Applicable&gt;</not 	Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than quarterly
Chief Financial Officer (CFO)	<not Applicable&gt;</not 	Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than quarterly
Chief Operating Officer (COO)	<not Applicable&gt;</not 	Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than quarterly
Environmental, Health, and Safety manager Vice President of Environmental Health and Safety	<not Applicable&gt;</not 	Managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than quarterly
Chief Risks Officer (CRO)	<not Applicable&gt;</not 	Both assessing and managing climate-related risks and opportunities	<not applicable=""></not>	More frequently than 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 climaterelated issues are monitored (do not include the names of individuals).

Climate-related issues are monitored by a variety of individuals within the Vistra organization with the Chief Executive Officer (CEO) having direct oversight. Reporting to the CEO through the Chief Financial Officer (CFO), the Chief Sustainability Officer (CSO) role was formalized in July of 2019 and is responsible for the development, implementation, and management of Vistra's sustainability strategy and related ESG initiatives. The CSO has a dual role as Vice President of Investor Relations providing the benefit of communicating directly with stakeholders, including investors, regarding Vistra's sustainability disclosures.

The CSO presents to the Sustainability and Risk Committee of the board at least quarterly, at each regularly scheduled committee meeting. Within the Vistra management team, the CSO is a member of the company's management committee, which consists of the CEO and his direct reports as well as leaders who represent key business areas and support functions. The management committee meeting forum includes discussion and decision-making related to general strategy, policy items, and operational updates. The CSO will present to the management committee as well as to the company's risk management committee on an as needed basis. The risk management committee, chaired by the CFO, provides risk management oversight, monitoring, control, and guidance for all risk management activities at Vistra, and it approves risk management activities within limits delegated by the board of directors. These two committees provide a forum for discussion and monitoring of climate-related issues with leaders from the risk, planning, strategy, regulatory and government affairs, legal, retail, and operations teams. The CSO also leads two working committees: the sustainability reporting committee, whose membership includes internal stakeholders providing the metrics and content for the annual sustainability report and various ESG surveys, and the sustainability advocacy committee, whose members include internal stakeholders involved in climate policy development and advocacy.

The Chief Risk Officer (CRO) leads the company's enterprise risk management process, which includes climate-related risks. The CRO meets annually with every functional group in the company to review the risk universe for any relevant updates. During the annual review process new risks are added, outdated risks are removed, and the likelihood and severity of all risks are evaluated. The output of this process is then reviewed by Vistra's risk management committee and reported to the Sustainability and Risk Committee of the board. Vistra's management utilizes the output from the risk framework to anticipate emerging risks, integrate risk into business planning, and take steps to mitigate the potential impact of any identified risks on the operations and performance of the business.

Vistra's Vice President of Environmental Health and Safety, reporting to the Chief Operating Officer, is responsible for the day to day management and oversight of environmental reporting, performance, and compliance as well as employee safety programs. The VP of Environmental Health and Safety reports quarterly to the Board of Directors on these topics. The CSO and VP of Environmental Health and Safety coordinate efforts regarding Vistra's emissions reductions targets and reporting of performance.

## 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	Type of	Activity	Comment
to	incentive	inventivized	
incentive			
All employees	Monetary reward	Other (please specify) (Achieving annual corporate goals)	Vistra employee performance evaluations include both corporate and individual factors. Several of Vistra's corporate objectives for 2020 include evaluation of various climate change corporate initiatives, as listed below. Individual factors take into account progress towards these goals. • Participating in legislative and regulatory efforts including support of market-based greenhouse gas abatement solutions • Lobbying Federal and State officials on key items, including support of carbon abatement programs • Leading on important issues including GHG abatement • Enhancing ESG disclosures • Evaluating and pursuing investments in retail, renewables, batteries and other relevant technologies

## 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	2	
Medium-term	2	5	
Long-term	5	30	

## C2.1b

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

Vistra considers a substantive impact in terms of impact on our enterprise value. Enterprise value is impacted by quantitative and qualitative factors. Quantitative factors include our expected future EBITDA and free cash flow (FCF). Qualitative factors include corporate reputation, progress towards ESG goals, safety, and overall value to stakeholders.

## 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 Upstream Downstream

#### **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**

Vistra's governance framework includes a robust enterprise risk analysis, through which all functional groups in the company provide input on key business, regulatory, market, legal, and climate risks, among other potential areas of risk. The risk management process is owned by the chief risk officer, who meets annually with every functional group in the company to review the risk universe for any relevant updates. During the annual review process new risks are added, outdated risks are removed, and the likelihood and severity of all risks are evaluated. The output of this process is then reviewed by Vistra's Risk Management Committee and reported to the Sustainability and Risk Committee of the board. In addition to this comprehensive annual process, the chief risk officer reviews the risk universe with functional leads on a quarterly basis and on an interim basis as needed to address emerging risks to ensure the risk matrix is current throughout the year. These quarterly and interim updates are also reported to the Sustainability and Risk Committee of the board. Management utilizes the output from the risk framework to anticipate emerging risks, integrate risk into business planning, and take steps to mitigate the potential impact of any identified risks on the operations and performance of the busines. Vistra applies this established risk management process identify risks that management actively evaluates and manages, it can also lead to the discovery of growth opportunities for the organization. For example, Vistra is actively evaluating incremental solar and energy storage development opportunities as well as additional renewable retail product offerings, which are business pursuits that fit within Vistra's corporate strategy and have a mitigating impact on the company's climate change profile. Vistra considers both physical and transition climate related risks to its business throughout its strategic corporate planning process including evaluating physical risks of assets when making investment decisions

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

	Relevance &	Please explain
	inclusion	
Current regulation	Relevant, always included	Current regulation is always considered in Vistra's risk management process. Vistra monitors the current regulatory environment and associated risks by a cross functional team including members from Legal, Environmental, Regulatory, Government Affairs, and Management. This group meets frequently and reports on current and pending regulations to executive management on at least a quarterly basis. Our businesses are subject to ongoing complex governmental regulations and legislation that have impacted, and may in the future impact, our businesses, results of operations, liquidity and financial condition. For example, we are subject to extensive environmental regulations by governmental authorities, including the EPA and the environmental regulatory bodies of states in which we operate. The EPA has recently finalized or proposed several regulatory actions establishing new requirements for control of certain emissions from sources, including electricity generation facilities. There is no assurance that the currently installed emissions control equipment at our lignite, coal and/or natural gas-fueled generation facilities will satisfy the requirements under any future EPA or state environmental regulations. Some of the recent regulatory actions, such as the EPA's Affordable Clean Energy (ACE) rule and proposed or future actions, including the Regional Haze program, could require us to install significant additional control equipment, resulting in potentially material costs of compliance for our generation units, including capital expenditures, higher operating and fuel costs and potential production curtaliments.
Emerging regulation	Relevant, always included	Emerging regulation is always considered in Vistra's risk management process. Similar to current regulation, Vistra monitors the emerging regulatory environment and associated risks by a cross functional team including members from Legal, Environmental, Regulatory, Government Affairs, and Management. This group meets frequently and reports on emerging regulations to executive management on at least a quarterly basis. Our businesses are subject to ongoing complex governmental regulations and legislation that have impacted, and may in the future impact, our businesses, results of operations, liquidity and financial condition. In addition, our cost of compliance with existing and new environmental laws could have a material adverse effect on us. For example, as a result of electricity produced for decades at coal-fueled power plants in Illinois, Texas and Ohio, we manage large amounts of coal combustion residuals (CCR) material in surface impoundments, all in compliance with applicable regulatory requirements. In addition to the federal requirements under the CCR rule, CCR surface impoundments will continue to be regulated by existing state laws, regulations and permits, as well as additional legal requirements that may be imposed in the future. These federal and state laws, regulations and other legal requirements may require or result in additional expenditures, increased operating and maintenance costs.
Technology	Relevant, always included	Technologi is always considered in Vistra's risk management process. Vistra is constantly monitoring the pace and type of technological advancements that could impact our business. Technological advances have improved, and are likely to continue to improve, for existing and alternative methods to produce and store power, including gas turbines, wind turbines, fuel cells, micro turbines, photovoltaic (solar) cells, batteries and concentrated solar thermal devices, along with improvements in traditional technologies. Such technological advances have reduced, and are expected to continue to reduce, the costs of power production or storage to a level that will enable these technologies to compete effectively with traditional generation facilities. Consequently, the value of our more traditional generation assets could be significantly reduced as a result of these competitive advances.
Legal	Relevant, always included	Legal is always considered in Vistra's risk management process. We are involved in the ordinary course of business in a number of lawsuits involving, among other matters, employment, commercial, and environmental issues, and other claims for injuries and damages. We evaluate litigation claims and legal proceedings to assess the likelihood of unfavorable outcomes and to estimate, if possible, the amount of potential losses. We are also involved in the ordinary course of business in regulatory investigations and other administrative proceedings, and we are exposed to the risk that we may become the subject of additional regulatory investigations or administrative proceedings. For example, in April 2013, environmental groups filed a Clean Air Act (CAA) citizen suit in the U.S. District Court for the Central District of Illinois against one of our subsidiaries that owns the Edwards Power Plant alleging violations of opacity and particulate matter limits at the facility. In August 2016, the district court granted the plaintiffs' motion for summary judgment on certain liability issues. In September 2019, the parties to the lawsuit announced a proposed settlement which was approved by the court in a consent decree in November 2019. The consent decree requires the retirement of the Edwards plant by the end of 2022 and funding for certain projects that benefit Peoria-area communities.
Market	Relevant, always included	Market is always considered in Vistra's risk management process. Vistra's commercial team, with depth of knowledge and experience in transacting in a variety of markets fuel types, participates in the risk management process to appropriately assess the magnitude and probability of market changes on our business. Our revenues, results of operations and operating cash flows depend in large part upon wholesale market prices for electricity, natural gas, urainum, lignite, coal, fuel and transportation in our regional markets and other competitive markets and upon prevailing retail electricity rates, which may be impacted by, among other things, actions of regulatory authorities. Market prices for power, capacity, ancillary services, natural gas, coal and oil are unpredictable and may fluctuate substantially over relatively short periods of time. The demand for and market prices of electricity and natural gas are affected by weather. As a result, our operating results may fluctuate on a seasonal basis. Typically, demand for and the price of electricity is higher in the summer and winter seasons, when the temperatures are more extreme, and the demand for and price of natural gas is also generally higher in the winter. More severe weather conditions such as heat waves or extreme winter weather may make such fluctuations more pronounced. Large increases of renewable generation, a minimal marginal cost generation source, can depress power prices in a market but can also cause greater instances of scarcity events when the renewable resource is not able to supply the power needed. This phenomenon was experienced in ERCOT, the electric grid of Texas, in August of 2019. When wind was not blowing, the supply of power generation fell causing spikes in power prices, up to \$9000/MWh, as peaking units needed to come online to meet consumer demand.
Reputation	Relevant, always included	Reputation is always considered in Vistra's risk management process. There is attention and interest nationally and internationally about global climate change and how greenhouse gas (GHG) emissions, such as carbon dioxide (CO2), contribute to global climate change. GHG emissions from the combustion of fossil fuels, primarily by our coal/lignite-fueled-generation plants, represent the substantial majority of our total GHG emissions. CO2, methane and nitrous oxide are emitted in this combustion process, with CO2 representing the largest portion of these GHG emissions. Depending on individual stakeholder's level of acceptance of our GHG emission levels and abatement strategy, our business reputation could suffer and impair or limit our access to capital. Insufficient access to capital, including as a result of sustainability positions taken by investors, may threaten the company's capacity to grow, execute its strategies and generate future financial returns.
Acute physical	Relevant, always included	Acute physical risks are always considered in Vistra's risk management process. Vistra may be materially and adversely affected by the effects of extreme weather conditions, including sustained cold or hot temperatures, hurricanes, floods, storms, fires, earthquakes or other natural disasters, which could stress our generation facilities and result in outages, destroy our assets and result in casualty losses that are not ultimately offset by insurance proceeds, and could require increased capital expenditures or maintenance costs. Moreover, an extreme weather event could cause disruption in service to customers due to downed wires and poles or damage to other operating equipment, which could require increased optimal systems in the service to customers due to downed wires and poles or damage to other operating equipment, which could require increases of electricity and lost revenue. Similarly, an extreme weather event might affect the availability of generation and transmission capacity, limiting our ability to source or deliver power where it is needed or limit our ability to source fuel for our plants (including due to damage to rail or natural gas pipeline infrastructure). Additionally, extreme weather may result in unexpected increases in customer load, requiring our retail operation to procure additional electricity supplies at wholesale prices in excess of customer sales prices for electricity. These conditions, which cannot be reliably predicted, could have adverse consequences by requiring us to seek additional sources of electricity when wholesale market prices are high or to sell excess electricity when market prices are low, which could have a material adverse effect on us.
Chronic physical	Relevant, always included	Chronic physical risks are always considered in Vistra's risk management process. Similar to acute physical risks, Vistra may be materially and adversely affected by the effects of extreme weather conditions and the prolonged or sustained shift of weather patterns. Vistra could be subject to sustained cold or hot temperatures, floods from sea or river level rise, droughts, or precipitation, which could stress our generation facilities and result in outages, destroy our assets, and could require increased capital expenditures, maintenance costs, or premature retirement of facility. Hot temperatures can limit the generation produced from a thermal facility, so rising temperatures could cause a degradation in our production.

## 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

Mandates on and regulation of existing products and services

#### Primary potential financial impact

Decreased asset value or asset useful life leading to write-offs, asset impairment or early retirement of existing assets

#### Climate risk type mapped to traditional financial services industry risk classification <Not Applicable>

#### **Company-specific description**

We are subject to extensive environmental regulation by governmental authorities, including the EPA and state environmental agencies and/or attorneys general. We may determine to retire plants earlier than when they might otherwise cease to operate, rather than incur the costs necessary to comply with these regulatory requirements. For example, the EPA's coal combustion residual (CCR) rule, which took effect in Oct. 2015, establishes minimum federal requirements for the construction, retrofitting, operation and closure of, and corrective action with respect to, existing and new CCR landfills and surface impoundments, as well as inactive CCR surface impoundments. The requirements include location restrictions, structural integrity criteria, groundwater monitoring, operating criteria, liner design criteria, closure and post-closure care, recordkeeping and notification. The rule allows existing CCR surface impoundments to continue to operate for the remainder of their operating life, but generally would require closure (i.e., cessation of placement of CCR material and corrective action necessary to reach the standards provided in the CCR rule and applicable state rules) if groundwater monitoring demonstrates that the CCR surface impoundment is responsible for exceedances of groundwater quality protection standards or the CCR surface impoundment is now April 2021. The final deadline to initiate closure of unlined CCR impoundments is now April 2021. The final rule allows a generation plant to seek the EPA's approval to retire by either 2023 or 2028 (depending on the size of the impoundment) as a means of compliance. We may decide to avail ourselves of this compliance mechanism for some of our facilities. In addition, in 2015 the EPA revised the Effluent Limitation Guidelines (ELG) for steam electricity generation facilities, which will impose more stringent standards for wastewater streams, such as flue gas wereint on later than Dec. 31, 2025 with a Dec. 31, 2023 compliance date for bottom ash transport water. The p

#### Time horizon

Medium-term

Likelihood

Virtually certain

#### Magnitude of impact

Low

#### Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency) <Not Applicable>

.....

Potential financial impact figure - minimum (currency)

0

# Potential financial impact figure – maximum (currency) 50000000

#### Explanation of financial impact figure

Vistra owns 6 coal plants that are at risk of retirement in part as a result of the federal CCR and ELG rules. While management expects the financial contribution of these coal plants will decrease over time, the timing of the retirement of these assets will likely be impacted by the federal CCR and ELG rules; this could result in the cumulative loss of free cash flow estimated in the range of \$0 to \$50 million beginning in the year of early retirement.

#### Cost of response to risk

0

## Description of response and explanation of cost calculation

Vistra's retirement of the coal plants will satisfy compliance with the federal CCR and ELG rules. Though the timing of spend may accelerate, any costs to retire and decommission the plants would have already been accounted for in Vistra's asset retirement obligation on its balance sheet.

#### Comment

Managing this risk is done in the ordinary course of business.

## Identifier

Risk 2

## Where in the value chain does the risk driver occur?

Direct operations

## Risk type & Primary climate-related risk driver

Reputation

Stigmatization of sector

## Primary potential financial impact

Decreased access to capital

## Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

## Company-specific description

There is attention and interest nationally and internationally about global climate change and how greenhouse gas (GHG) emissions, such as carbon dioxide (CO2), contribute to global climate change. The utility sector is the second highest contributor of GHG emissions, after the transport industry. GHG emissions from the combustion of fossil fuels, primarily by our coal/lignite-fueled-generation plants, represent the substantial majority of Vistra's total GHG emissions. CO2, methane and nitrous oxide are emitted in this combustion process, with CO2 representing the largest portion of these GHG emissions. Depending on individual stakeholders level of acceptance of the utility sector and/or Vistra's own GHG emission levels and abatement strategy, our reputation could be harmed and thereby impair or limit our access to new capital or impair our ability to procure sufficient insurance coverage for our fossil assets. Insufficient access to new capital or an inability to procure adequate insurance coverage for the fossil assets in our wholesale business, including as a result of sustainability positions taken by investors or insurance companies, may threaten the company's capacity to grow, execute its strategies, and generate future financial returns.

#### Time horizon

#### Medium-term

## Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency) <Not Applicable>

Potential financial impact figure – minimum (currency) 100000000

Potential financial impact figure – maximum (currency)

#### Explanation of financial impact figure

Estimate of impact to Vistra's enterprise value resulting from an insufficient access to insurance coverage or capital for the fossil assets in our wholesale business, including any premium required for capital availability, due to reputational harm.

#### Cost of response to risk

0

## Description of response and explanation of cost calculation

Vistra's executive management and Investor Relations team regularly communicate with financial market constituents about the actions Vistra has taken and expects to take to reduce its greenhouse gas emissions and transition its portfolio toward low-to-no carbon generating assets.

#### Comment

Managing this risk is done in the ordinary course of business.

## Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Reputation

Increased stakeholder concern or negative stakeholder feedback

#### Primary potential financial impact

Other, please specify (Low valuation of the company; lower access to capital)

#### Climate risk type mapped to traditional financial services industry risk classification <Not Applicable>

#### **Company-specific description**

Some investors perceive risks to the long-term viability of Vistra's wholesale business, specifically its fossil generation assets, as the United States electric grid transitions away from fossil fuel generation toward renewable resources. With this perceived risk, some investors ascribe a low terminal value to Vistra's wholesale business, which in turn reduces the overall terminal value for the company. While Vistra management has a very different view of the long-term viability of its business and operations, including its opportunity to invest in the renewable transition, if financial market participants maintain this bearish view, Vistra will not be able to realize the fundamental value of its impressive cash generation.

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)

<Not Applicable>

Potential financial impact figure - minimum (currency)

0

Potential financial impact figure – maximum (currency) 650000000

#### Explanation of financial impact figure

Vistra's research suggests that ESG focused utilities earn up to a 2x enterprise value/EBITDA premium as compared to non-ESG focused utilities. Management believes Vistra's current valuation is being impacted by this stakeholder concern, which suggests that Vistra's current enterprise value is being undervalued by the market in the range of \$0 to approximately \$6.5 billion (approximately 2x adjusted EBITDA). If management is unsuccessful in addressing this concern in the minds of stakeholders, the company may not be able to realize this higher enterprise valuation.

#### Cost of response to risk

0

Description of response and explanation of cost calculation

Vistra's executive management and Investor Relations team regularly communicate with financial market constituents about (i) the actions Vistra has taken and expects to take to transform the generation fleet of Vistra's wholesale business, (ii) the importance of highly-efficient, flexible gas-fueled assets for reliability as the country transitions to a renewable-heavy electric gird, and (iii) Vistra's opportunity to invest in renewable resources at returns that exceed its internal investment thresholds. Along these lines, Vistra's executive management and Investor Relations team have provided the market with a 10-year view outlining its expectations for this growth and transformation, highlighting the expected resiliency of Vistra's business.

#### Comment

Managing this risk is done in the ordinary course of business.

## Identifier

Risk 4

## Where in the value chain does the risk driver occur?

Direct operations

## Risk type & Primary climate-related risk driver

Technology Substitution of existing products and services with lower emissions options

#### Primary potential financial impact

Decreased revenues due to reduced demand for products and services

# Climate risk type mapped to traditional financial services industry risk classification <Not Applicable>

#### Company-specific description

Vistra is an integrated energy company with both retail and wholesale businesses. In the last 5 years, Vistra's wholesale business has transitioned from a coal-heavy generation fleet to one that is predominantly natural gas. Vistra believes that natural gas-fueled generation will be a necessary transition resource for many years to come, as a complement to renewable resources. Natural gas-fueled generation provides cost-effective, flexible, and reliable dispatch of electricity, and will also provide the critical backstop to intermittent renewables. In fact, we have already seen evidence of the critical reliability need for dispatchable resources in the heavy renewable markets of California, Texas, and Germany. However, an extreme accelerated transition to renewable power generation and battery energy storage resulting from specific public policy support or rapid advancements or accelerations of the cost curve for new technology could shorten the asset life of some of our assets in the long-term. In this circumstance, our existing thermal resources that we consider to be longer-term in our portfolio could earn lower revenues than we currently expect.

Time horizon Long-term

0

**Likelihood** Unlikely

#### Magnitude of impact Medium

----

#### Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

## Potential financial impact figure - minimum (currency)

0

# Potential financial impact figure – maximum (currency) 200000000

\_ . . . . . . .

## Explanation of financial impact figure

Approximately 60% (or approximately \$2 billion) of Vistra's 2020 adjusted EBITDA is derived from thermal resources that we consider to be longer term in our portfolio. A portion of EBITDA from these generating assets could be at risk if a renewable transition accelerates at a faster pace than we currently expect or have the opportunity to respond.

## Cost of response to risk

50000000

## Description of response and explanation of cost calculation

Vistra management expects it will invest, on average, \$500 million of equity per year on renewable generating assets (both solar and battery storage) and retail businesses as our portfolio continues to transition away from carbon-heavy generating resources. These growth investments will generate EBITDA that will, over time, replace EBITDA as our thermal resources retire or reduce their output.

## Comment

Identifier

Risk 5

### 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

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification <Not Applicable>

#### Company-specific description

Vistra's generation facilities could be subject to extreme weather conditions, including sustained cold or hot temperatures, hurricanes, floods, storms, fires, earthquakes or other natural disasters, which could stress our generation facilities and result in outages, destroy our assets and result in casualty losses that are not ultimately offset by insurance proceeds, and could require increased capital expenditures or maintenance costs, including supply chain costs. Moreover, an extreme weather event could cause disruption in service to customers due to downed wires and poles or damage to other operating equipment, which could result in us foregoing sales of electricity and lost revenue. Similarly, an extreme weather event might affect the availability of generation and transmission capacity, limiting our ability to source or deliver power where it is needed or limit our ability to source fuel for our plants (including due to damage to rail or natural gas pipeline infrastructure). Additionally, extreme weather may result in unexpected increases in customer load, requiring our retail operation to procure additional electricity supplies at wholesale prices in excess of customer sales prices for electricity. These conditions, which cannot be reliably predicted, could have adverse consequences by requiring us to seek additional sources of electricity when wholesale market prices are high or to sell excess electricity when market prices are low, which could have a material adverse effect on us.

#### **Time horizon**

Short-term

Likelihood

About as likely as not

### Magnitude of impact

Low

Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency) <Not Applicable>

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency) 12500000

#### Explanation of financial impact figure

The estimated financial impact assumes up to one natural disaster event occurring in the next two years causing damage to one of Vistra's facilities that would require Vistra to increase capital expenditures, capped at Vistra's annual insurance deductible. Vistra is not able to estimate the potential financial impact of lost revenues due to downed power lines causing a disruption in our ability to deliver power to customers, for example, as these financial impacts would greatly depend on the duration and time of year of the service interruption as well as the number of customers impacted.

#### Cost of response to risk

17500000

### Description of response and explanation of cost calculation

Vistra maintains an amount of insurance protection that we consider adequate to cover potential financial impacts from acute physical risks. The cost of response estimated is Vistra's annual premium to maintain this coverage.

#### Comment

Vistra monitors weather reports and will enact safety procedures in response to extreme weather events to ensure the safety of all employees and contractors working at its facilities.

## 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? 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

Vistra Retail currently offers more than 50 electricity plans that incorporate renewable energy into the product offer. These products are offered to customers through Vistra's 12 retail brands leveraging various marketing channels across the U.S. These brands offer renewable energy, carbon offset, and energy management products that help consumers reduce their carbon footprint. Retail customers make decisions on which retail electricity product to buy based on a variety of factors including price, customer service, brand, product choices that meet their needs, bundles, or value-added features. If consumers in the markets where Vistra sells its retail electricity products continue to prioritize renewable energy in their product selection, Vistra, with its diverse portfolio of product offerings appealing to the renewable conscious customer, will continue to have the opportunity to expand its customer base with these product offerings.

**Time horizon** 

#### Medium-term

## Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency) <Not Applicable>

Potential financial impact figure - minimum (currency)

0

Potential financial impact figure - maximum (currency)

30000000

#### Explanation of financial impact figure

If Vistra is able to grow its customer count by 0-5% through its renewable retail product offerings, this could translate into an annual adjusted EBITDA uplift in the range of \$0 to \$30,000,000. The financial impact will depend on the popularity and uptake of each product offered.

#### Cost to realize opportunity

0

## Strategy to realize opportunity and explanation of cost calculation

Vistra's product innovation and customer acquisition efforts are part of its ordinary course of business. After gathering market research, Vistra's marketing and product development teams identify and create innovative products to meet customer wants and needs. In Texas, Vistra's leading retailer, TXU Energy, was the first to market with a Free Nights and Solar Days product, providing customers a 100% renewable electricity plan combined with free energy. Another innovative product Vistra Retail launched is an online tool called My Energy Dashboard, which helps customers manage their energy consumption while providing real time data to make decisions on electricity use to save money.

### Comment

### Identifier

Opp2

Where in the value chain does the opportunity occur? Direct operations

Opportunity type Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

## Primary potential financial impact

Increased revenues resulting from increased production capacity

#### Company-specific description

As the country continues to transition the electric grid away from traditional thermal resources toward zero-emitting generating assets, Vistra is in the perfect position to participate in this supply rotation. With its market-leading commercial team, development project management skills, operational and maintenance capabilities, and attractive sites, Vistra is a natural owner of these assets. Vistra knows how to manage the volatility and risk associated with renewables—and its retail operations serve nearly 5 million retail customers who are increasingly seeking to procure their electricity needs from renewable sources. As a result, Vistra has the ability to capture attractive stand-alone returns on these investments, with the opportunity to earn superior integrated returns all the way through the retail value chain. Vistra is already a market leader in battery energy storage, currently developing the largest battery of its kind in Moss Landing, California at 400-MW/1,600-MWh. In addition, Vistra is developing a 36.25- MW/145-MWh energy storage system at the site of Vistra's existing Oakland Power Plant and has commenced commercial operations of a 10-MW/42-MWh battery on the site of Vistra's 180-megawatt Upton 2 Solar Power Plant. Over the next 10 years, Vistra will continue to seek out development projects and technologies related to renewables and energy storage. We have development opportunities at our current conventional generation sites, where we can utilize existing land and infrastructure to enable lower cost and faster development of new renewable generation assets. In the near term, we see potential for further energy storage eque development in California at our existing sites, we are actively evaluating the development of over approximately 2,000 MW of solar projects in ERCOT, and we are supporting the llinois Coal to Solar and Energy Storage Act of 2019, which would transition coal plants in Illinois to utility-scale solar and energy storage. Vistra estimates it will invest on average \$500 millio

Time horizon Medium-term

**Likelihood** Very likely

Magnitude of impact Medium

Are you able to provide a potential financial impact figure? Yes, an estimated range

Potential financial impact figure (currency) <Not Applicable>

Potential financial impact figure – minimum (currency) 90000000

Potential financial impact figure – maximum (currency) 100000000

Explanation of financial impact figure

Reflects potential annual EBITDA generated by \$500M of equity in investments. Investments are assumed to be funded at Vistra's overall company leverage ratios and to achieve returns that are ~500-600 basis points higher than Vistra's estimated cost of equity, resulting in an estimated incremental \$90 to \$100 million per year of annual EBITDA contribution.

#### Cost to realize opportunity 500000000

#### Strategy to realize opportunity and explanation of cost calculation

Vistra management has stated that it intends to invest, on average, \$500 million of equity per year on renewable generating assets (both solar and battery) and retail businesses. We estimate these investments will generate an incremental \$90 to \$100 million per year of annual EBITDA contribution.

#### Comment

Identifie

Opp3

#### Where in the value chain does the opportunity occur?

Direct operations

## **Opportunity type**

Products and services

## Primary climate-related opportunity driver

Other, please specify (The electrification of the economy, specifically from transport, is expected to increase demand for electricity over the next several decades)

### Primary potential financial impact

Increased revenues resulting from increased demand for products and services

#### Company-specific description

Under nearly all climate scenarios, demand for electricity is expected to increase between now and 2050 as growth from the electrification of the economy is projected to more than offset any energy efficiency improvements adopted. Vistra's integrated operations are well-positioned to service this expected increase in electricity demandboth on the generation and retail sides of the equation. Vistra's existing highly efficient, flexible, and low-emitting natural gas fleet will be critical to meet this growing electricity demand, as it is a low-emitting resource and is easily dispatchable to support the growing reliance on intermittent renewable resources. Vistra is also investing in incremental renewable generating assets and owns a highly efficient nuclear plant in Texas, both of which will be critical to the future electric supply. On the retail side, Vistra already serves nearly 5 million retail electricity customers with affordable, reliable power. Vistra is well-positioned to service a future increased demand for electricity. Electricity is an essential product-and its importance has never been more clear than in the midst of the COVID pandemic in 2020. We expect we will be able to grow our retail customer base in the years to come, as Vistra's integrated operations provide it a unique competitive advantage to offer the types of products and services customers require.

Time horizon Long-term

Likelihood

Likelv

#### Magnitude of impact Medium

Are you able to provide a potential financial impact figure? Yes, an estimated range

## Potential financial impact figure (currency)

<Not Applicable>

#### Potential financial impact figure - minimum (currency)

0

#### Potential financial impact figure - maximum (currency) 350000000

#### Explanation of financial impact figure

Estimate of potential annual EBITDA contribution resulting from an increase in both electricity volumes consumed and higher electricity prices due to increased demand and volatility, benefiting both our retail and generation businesses.

### Cost to realize opportunity

550000000

### Strategy to realize opportunity and explanation of cost calculation

To be able to provide electricity when demand is high, Vistra must keep well maintained facilities ready to generate power when needed. Vistra's maintenance capex averages \$500-\$600 million annually

#### Comment

Identifie Opp4

#### Where in the value chain does the opportunity occur? Direct operations

**Opportunity type** Energy source

#### Primary climate-related opportunity driver Use of supportive policy incentives

Primary potential financial impact Returns on investment in low-emission technology

## Company-specific description

Vistra could be a beneficiary of various supportive policy incentives, including a carbon fee regime and tax incentives for renewable development. Vistra is a proponent of an escalating nationwide carbon fee with a dividend and border carbon adjustment as the best public policy to influence the transition to a lower carbon economy. Such a policy would create a level playing field for competitive businesses and appropriately incentivize investments in new technologies. Vistra could be a beneficiary of such a policy as it should incentivize owners of older, higher-heat rate thermal resources to retire those assets given their increased cost. In turn, this should improve the economic returns of Vistra's existing and planned renewable and nuclear assets while maintaining a critical role for Vistra's highly-efficient and low cost natural gas assets. In addition, Vistra can take advantage of tax incentives to develop renewable projects to reduce its future tax and/or tax receivable agreement obligations.

#### Time horizon

Long-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) <Not Applicable>

Potential financial impact figure - minimum (currency)

0

Potential financial impact figure – maximum (currency) 25000000

#### Explanation of financial impact figure

The potential financial impact to Vistra of supportive policy incentives such as a national carbon fee program or favorable tax incentives will be highly dependent on the details of any applicable policy. Vistra has evaluated various policy scenarios and believes it is reasonable to assume Vistra's cash flow could improve by \$0 to \$250 million upon the initial implementation of policy incentives of this type.

Cost to realize opportunity

0

### Strategy to realize opportunity and explanation of cost calculation

In this illustrative example, Vistra would already be making the underlying investments in renewable generating assets that could be beneficiaries of supportive tax policy and would already own and maintain a generation fleet that could benefit from a national carbon fee program.

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) Does your organization use climate-related scenario analysis to inform its strategy? No, but we anticipate using qualitative and/or quantitative analysis in the next two years

### C3.1c

(C3.1c) Why does your organization not use climate-related scenario analysis to inform its strategy?

Vistra is currently undergoing a climate scenario analysis and hopes to provide discussion of the results to its stakeholders in the latter part of 2020.

## C3.1d

## (C3.1d) 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	Through Vistra's 12 individual retail brands and various marketing channels, we balance the needs and preferences of our customers through a vast portfolio of products and services, including green energy and conservation-focused products. As consumer preferences change to more climate focused products, Vistra Retail's marketing team creates new market leading, innovative products. For example, Vistra's retail brand, TXU Energy, launched TXU Energy's Free Nights and Solar Days which offers residential customers 100 percent renewable energy (100 percent wind power at night and 100 percent solar during the day). Vistra Retail also offers energy efficiency products, such as TXU's Thermostat, helping customers monitor and lower their energy usage. For its large business customers who have their own climate goals, Vistra's business markets team creates customized solutions that utilize wind PPAs, utility scale solar generation, and other innovative structures for our business customer base.
Supply chain and/or value chain	Yes	Vistra relies on natural gas, coal, and oil to fuel the majority of our power generation facilities. Delivery of these fuels to the facilities is dependent upon the continuing financial viability of contractual counterparties 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, we are subject to the risks of disruptions or curtailments in the production of power at our generation facilities if no fuel is available at any price or if a counterparty fails to perform or if there is a disruption in the fuel delivery infrastructure. Vistra's commercial team evaluates and considers these supply chain risks when entering contracts to hedge portions of purchase and sale commitments.
Investment in R&D	Yes	Vistra is not an R&D company but does look at venture capital opportunities to stay close to emerging technologies. Vistra was an early adopter of battery energy storage, gaining industry-leading expertise in the development and commercialization of battery storage assets and is now a market leader in utility-scale battery development.
Operations	Yes	Vistra understands the impact of our business on the environment and knows we have a social responsibility to combat climate change and reduce our carbon footprint, while still providing safe and reliable energy to our customers. Vistra follows all current environmental compliance and regulations when running its power plants. With long term CO2e emission reduction targets of 50% by 2030 and 80% by 2050, Vistra must make long term operations decisions that meet or exceed these goals coupled with adjusting operations to meet any environmental laws and regulations imposed both regionally and nationally as well as meet the reliability needs of the electric grids where we operate. Changes in the asset life, or the operations of a power plant, can change due to the acceleration of renewables in the market it operates, new technologies, and changing regulations.

## C3.1e

## (C3.1e) 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 Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	Enancial Planning Overview – Vistra's 10-year view, published in February 2020 during its 4th Quarter 2019 earnings call, provides a glimpse into the potential transformation of our business, forecasting an asset mix that we believe will support electric system reliability while providing customers with cost-effective energy that meets their sustainable preferences and significantly reduces our carbon lootprint. Notably, this 10-year view assumes Vistra will retire approximately 7.000 MW of additional coal generation and invest in approximately 6.000 MW of renewables and battery storage between new and 2030. Vistra is focused on continuing to transition as a clean energy company with expectations that nearly 20% of its EBITDA and generation capacity will be dirived from renewable assets by 2030. We expect we will achieve this transformation of the supply side of our business through approximately 55 billion dollars of investments over the next decade. Revenues – Vistra evaluates how its revenues are incorporated into Vistra's five year financial plan. Direct Costs – Vistra evaluates how its direct costs might change as a result of direct or indirect indirect indirect indirect indirect is customers, which can fluctuate based on supplydemand fundamentals. If geographies where we operate are projected to experience more extreme weather events, the demand for electricity could rise, tightening the supplydemand balance. Similarly, our generation business thould ban attra dig as fracking, the price of natural gas would likely rise. Vistra hedges is fuel exposure in order to mitigate the financial impacts of any near-term fluctuations in fuel prices. Any anticipated changes to inderectosts are incorporated into Vistra's five year financial plan. Indirect Costs – Climate-related risks and opportunities and sustainability team in order to increase its capacity to address the increasing volume of climate-related surveys. Similarly, Vistra has now engaged a third party auditor to independenty verify Vistra's annual greenh

## C3.1f

(C3.1f) 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 2019 Target coverage Company-wide Scope(s) (or Scope 3 category) Scope 1 Base year 2010 Covered emissions in base year (metric tons CO2e) 172810588 Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category) 100 Target year 2030 Targeted reduction from base year (%) 50

Covered emissions in target year (metric tons CO2e) [auto-calculated] 86405294

Covered emissions in reporting year (metric tons CO2e) 105523364

% of target achieved [auto-calculated] 77.8739598987997

Target status in reporting year Underway

Is this a science-based target? No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)

Vistra has retired ~13,000 MW of coal and gas plants since 2010, contributing to a majority of the emissions reduction progress.

Target reference number Abs 2

Year target was set 2019

Target coverage Company-wide

Scope(s) (or Scope 3 category) Scope 1

Base year 2010

Covered emissions in base year (metric tons CO2e) 172810588

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

**Target year** 2050

100

Targeted reduction from base year (%) 80

Covered emissions in target year (metric tons CO2e) [auto-calculated] 34562117.6

Covered emissions in reporting year (metric tons CO2e) 105523364

% of target achieved [auto-calculated] 48.6712249367498

## Is this a science-based target?

No, but we anticipate setting one in the next  $\ensuremath{\mathsf{2}}$  years

## Please explain (including target coverage)

Vistra has retired ~13,000 MW of coal and gas plants since 2010, contributing to a majority of the emissions reduction progress.

## C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year? No other climate-related targets

## 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	16	
To be implemented*	3	550000
Implementation commenced*	2	3500000
Implemented*	7	10000000
Not to be implemented		

C4.3b

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

Initiative category & Initiative type

Low-carbon energy generation

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

251569 Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

Investment required (unit currency – as specified in C0.4) 231000000

Payback period 4-10 years

### Estimated lifetime of the initiative

>30 years

#### Comment

In May 2017, Vistra acquired the rights to develop, construct and operate a utility scale solar photovoltaic power generation facility in Upton County, Texas (Upton 2). As part of this project, we entered into a turnkey engineering, procurement and construction agreement to construct the approximately 180 MW facility. The facility began test operations in March 2018 and commercial operations began in June 2018. In 2019, this solar facility generated 438,784 MWh of power translating to avoided emissions of 251,569 metric tons CO2e (calculated using the U.S. EPA's AVERT tool: https://www.epa.gov/statelocalenergy/avoided-emissions-and-generation-tool-avert).

#### Initiative category & Initiative type

Energy efficiency in production processes

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

Scope(s) Scope 1

#### Voluntary/Mandatory

Voluntary

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

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

Payback period Please select

Estimated lifetime of the initiative Please select

#### Comment

In 2019, Vistra completed projects at its Hays power plants to replace their conventional SCR catalyst with a multi-function catalyst, which resulted in emission reductions during normal operating conditions of CO and VOCs by 90% and 43%, respectively.

## C4.3c

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

Method	Comment
Compliance with	Vistra does business the right way and will maintain strict compliance with environmental laws and regulations. In some cases this means that Vistra must make capital expenditure
regulatory	decisions on the maintenance and upgrades at its existing power generation facilities. In addition, changes to, or development of, legislation that requires the use of clean renewable and
requirements/standards	alternate fuel sources or mandate the implementation of energy conservation programs that require the implementation of new technologies, could increase our capital expenditures.
Internal price on	When Vistra evaluates power generation investments, the multiples applied by Vistra's team to value opportunities take into account carbon intensity and useful life. Lower emitting
carbon	investments are prescribed higher multiples recognizing the higher value of low carbon investments.

### 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

Group of products

#### Description of product/Group of products

Vistra Retail currently offers more than 50 electricity plans that incorporate renewable energy into the product offer. These products are offered to customers through Vistra's 12 retail brands leveraging various marketing channels across the U.S. These brands offer renewable energy, carbon offset, and energy management products that help consumers reduce their carbon footprint. For example, in 2019, Vistra launched TXU Energy Pure Solar, which provides residential customers easy access to solar power. This value-add allows customers turn any TXU Energy electricity plan into a renewable solar plan. TXU Energy Pure Solar is a first-of-its-kind offering in Texas. Known for its innovation and its desire to give customers what they want, TXU Energy's renewable portfolio of offerings is the most comprehensive in ERCOT, with eight products, many of which were first-to-market. Other renewable energy firsts include its popular 100% renewable Free Nights and Solar Days plan, community solar through TXU Energy Solar Club, and its 100% solar plan called TXU Energy Solar Advantage.

#### 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 (internal methodology)

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

#### % of total portfolio value

<Not Applicable>

#### Asset classes/ product types

<Not Applicable>

#### Comment

Vistra does not disclose its retail revenues by product type, as we consider this information competitively sensitive. Vistra sources the renewable power that it provides to its customers through its own solar generation facility, power purchase agreements for wind and solar generation, and the purchase of renewable energy credits.

#### Level of aggregation

Company-wide

### Description of product/Group of products

Renewable and Zero Emissions Generation: Vistra's current electricity generation capacity includes an 180 MW solar facility and a 2,300 MW zero carbon nuclear facility.

#### Are these low-carbon product(s) or do they enable avoided emissions? Low-carbon product and 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 (Fossil generation avoided)

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

6.5

## % of total portfolio value

<Not Applicable>

## Asset classes/ product types

<Not Applicable>

### Comment

Vistra has not publicly broken out its revenues by generation source; however, in 2019 Vistra earned approximately 6.5% of its adjusted EBITDA from its renewable and nuclear generation. Vistra has already announced plans to expand its renewable and carbon free generation with the development of its battery energy storage projects in California. In addition, Vistra is evaluating the development of over approximately 2,000 MW of solar projects in Texas.

## C-EU4.6

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

Vistra does not own or operate assets with high methane emissions nor does Vistra own natural gas pipelines. However, the majority of our power plants do utilize natural gas fuel which we believe will be a necessary fuel as the country transitions to a renewable-heavy electric gird. Vistra has a robust supplier assessment ensuring all suppliers, including our natural gas suppliers, share our commitment to safety, performance excellence, and ethical business practices.

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 2010

Base year end December 31 2010

Base year emissions (metric tons CO2e) 172810588

Comment

Emissions are equity adjusted

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

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 US EPA Emissions & Generation Resource Integrated Database (eGRID)

## 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) 105523364

Start date January 1 2019

End date December 31 2019

Comment Equity adjusted

Equity adjuste

Past year 1

Gross global Scope 1 emissions (metric tons CO2e) 118650466

Start date January 1 2018

End date December 31 2018

Comment Equity adjusted

## Past year 2

Gross global Scope 1 emissions (metric tons CO2e) 143799952

Start date January 1 2017

End date December 31 2017

Comment Equity adjusted

## 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 249068

Scope 2, market-based (if applicable) <Not Applicable>

Start date

January 1 2019

End date December 31 2019

2000111201 01 2

Comment

Scope 2 emissions represent the electricity purchased from the grid and consumed at Vistra's 54 operational power plants and its 4 corporate locations in the Dallas, TX metroplex. Reported Scope 2 emissions are location-based and were calculated using the U.S. EPA's eGRID2018 emissions factors.

## Past year 1

Scope 2, location-based

Scope 2, market-based (if applicable) <Not Applicable>

Start date

End date

Comment

Past year 2

Scope 2, location-based

Scope 2, market-based (if applicable) <Not Applicable>

Start date

End date

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

Vistra excluded Scope 2 emissions from its corporate office locations outside of the Dallas metroplex.

#### Relevance of Scope 1 emissions from this source No emissions from this source

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) Please select

#### Explain why this source is excluded

The office locations excluded are small, rented spaces, housing only 4% of employees and contributing a de minimis amount of Scope 2 emissions.

#### Source

Mobile equipment at generation facilities

## Relevance of Scope 1 emissions from this source

Emissions are not relevant

#### Relevance of location-based Scope 2 emissions from this source

No emissions from this source

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

#### Explain why this source is excluded

Reported scope 1 emissions does not include mobile equipment used at facilities for operations as these are not a material source of emissions.

## 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

## Metric tonnes CO2e

<Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

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

# <Not Applicable>

Vistra will consider the Scope 3 emissions from purchased goods and services as it defines its Scope 3 emissions scope and boundary for future reporting periods.

#### **Capital goods**

**Evaluation status** Not relevant, explanation provided

## Metric tonnes CO2e

<Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

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

# <Not Applicable> Please explain

As a power generator, Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from capital goods are not considered material to our overall emissions profile.

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

#### **Evaluation status**

Relevant, not yet calculated

## Metric tonnes CO2e

<Not Applicable>

## Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

#### Please explain

Vistra will consider the Scope 3 emissions from purchased fuels and power as it defines its Scope 3 emissions scope and boundary for future reporting periods.

#### Upstream transportation and distribution

## **Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

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

## <Not Applicable> Please explain

As a power generator, Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from upstream transportation and distribution are not considered material to our overall emissions profile.

#### Waste generated in operations

**Evaluation status** 

Not relevant, explanation provided

## Metric tonnes CO2e

<Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

As a power generator, Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from waste generated in operations are not considered material to our overall emissions profile.

#### **Business trave**

**Evaluation status** 

Relevant, not yet calculated

#### Metric tonnes CO2e <Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

## <Not Applicable> Please explain

Vistra will consider the Scope 3 emissions from business travel as it defines its Scope 3 emissions scope and boundary for future reporting periods.

## Employee commuting

**Evaluation status** Relevant, not yet calculated

## Metric tonnes CO2e

<Not Applicable>

## Emissions calculation methodology

<Not Applicable>

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

## <Not Applicable> Please explain

Vistra will consider the Scope 3 emissions from employee commuting as it defines its Scope 3 emissions scope and boundary for future reporting periods.

### Upstream leased assets

**Evaluation status** Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

## Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

## Please explain

As a power generator, Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from upstream leased assets are not considered material to our overall emissions profile.

#### Downstream transportation and distribution

## Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

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

# <Not Applicable> Please explain

As a power generator, Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from downstream transportation and distribution are not considered material to our overall emissions profile.

#### Processing of sold products

**Evaluation status** Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

#### Please explain

All processing of sold products is covered in Vistra's Scope 1 and Scope 2 emissions.

#### Use of sold products

Evaluation status Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

## Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

#### Please explain

Vistra sells electricity that is consumed by its customers. Through this retail business, Vistra can sell products that help consumers reduce their scope 1 and scope 2 emissions.

#### End of life treatment of sold products

**Evaluation status** 

Not relevant, explanation provided

## Metric tonnes CO2e

<Not Applicable>

## Emissions calculation methodology

<Not Applicable>

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

# <Not Applicable>

Vistra sells electricity and natural gas, neither of which require end of life treatment.

### Downstream leased assets

**Evaluation status** Not relevant, explanation provided

Antic tonnes CO2e Not Applicable>

## Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

## Please explain

As a power generator Scope 1 emissions cover the vast majority of Vistra's total emissions. Scope 3 emissions from downstream leased assets are not considered material to our overall emissions profile.

#### Franchises

**Evaluation status** Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

## Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>
Please explain

Vistra does not own franchises.

#### Investments

Evaluation status Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

## Emissions calculation methodology

<Not Applicable>

# Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

Please explain

Any investments Vistra makes would be included in it's Scope 1 and Scope 2 emissions.

#### Other (upstream)

Evaluation status Not evaluated

Metric tonnes CO2e <Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

## Please explain

#### Other (downstream)

Evaluation status Not evaluated

Metric tonnes CO2e <Not Applicable>

## Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners <Not Applicable>

Please explain

## C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?  $\ensuremath{\mathsf{No}}$ 

## 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 0.009

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e) 105772432

Metric denominator unit total revenue

Metric denominator: Unit total 11809000000

Scope 2 figure used Location-based

% change from previous year 31

Direction of change Decreased

### Reason for change

The decrease was driven by reduced emissions year over year due to regulation caps on emissions in the MISO Illinois Region as well as the retirement of 4 coal fueled power plants in November and December 2019 in the same region. In addition, Vistra's revenue increased, with more revenue coming from low to zero emissions activities. Vistra's intensity for 2018 was 0.013 (gross emissions of 118,650,466 (scope 2 emissions were not calculated for 2018)) and 2018 revenue of 9,144,000,000).

#### Intensity figure 0.57

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e) 105772432

Metric denominator megawatt hour generated (MWh)

Metric denominator: Unit total 186428605

Scope 2 figure used Location-based

% change from previous year

**Direction of change** <Not Applicable>

### Reason for change

Not applicable as this is the first year Vistra is reporting Scope 2 emissions and this intensity figure.

## 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	104976169	Other, please specify (Mandatory GHG Reporting Rule, 40 CFR Part 98)
CH4	8153	Other, please specify (Mandatory GHG Reporting Rule, 40 CFR Part 98)
N2O	1152	Other, please specify (Mandatory GHG Reporting Rule, 40 CFR Part 98)

## 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)	104976169	8154	0	105523364	SF6 emissions are not calculated
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)
United States of America	105523364

## 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	105523364

## 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-EU7.4/C-BU7.4/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	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Chemicals production activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Coal production activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Electric utility activities	105523364	<not applicable=""></not>	
Metals and mining production activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Oil and gas production activities (upstream)	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Oil and gas production activities (midstream)	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Oil and gas production activities (downstream)	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Steel production activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Transport OEM activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Transport services activities	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>

## 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	0	No change	0	
Other emissions reduction activities	13127102	Decreased	11	CO2e was reduced primarily by the emission caps imposed by regulation on our facilities in the MISO Illinois Region as well as the retirement of 4 coal fueled power plants in November and December in the same region. Our total Scope 1 emissions for 2018 was 118,650,466 metric tons CO2e, therefore we arrived at 11% (118,650,466-105,523,364= 13,127,102 then 13,127,102/118,650,466).
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	0	No change	0	
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	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 45% but less than or equal to 50%

## 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)	0	484459400	484459400
Consumption of purchased or acquired electricity	<not applicable=""></not>	0	549700	549700
Consumption of purchased or acquired heat	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired steam	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired cooling	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of self-generated non-fuel renewable energy	<not applicable=""></not>	0	<not applicable=""></not>	0
Total energy consumption	<not applicable=""></not>	0	485009100	485009100

## 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	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

MWh 0 MWh 0 MWh <Not Applicable>

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

Fuels (excluding feedstocks) Natural Gas
Heating value HHV (higher heating value)
Total fuel MWh consumed by the organization 226702800
MWh fuel consumed for self-generation of electricity 0
MWh fuel consumed for self-generation of heat 0
MWh fuel consumed for self-generation of steam <not applicable=""></not>
MWh fuel consumed for self-generation of cooling <not applicable=""></not>
MWh fuel consumed for self-cogeneration or self-trigeneration <not applicable=""></not>
Emission factor 53.06
Unit kg CO2 per million Btu
Emissions factor source U.S. EPA Part 98 Emission factors: https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
Comment
Fuels (excluding feedstocks) Coal
Heating value HHV (higher heating value)
Total fuel MWh consumed by the organization 232632300
MWh fuel consumed for self-generation of electricity 0
MWh fuel consumed for self-generation of heat 0
MWh fuel consumed for self-generation of steam

## MWh fuel consumed for self-generation of cooling

<Not Applicable>

#### MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

**Emission factor** 

95.52

Unit kg CO2 per million Btu

## **Emissions factor source**

U.S. EPA Part 98 Emission factors: https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors\_mar\_2018\_0.pdf

#### Comment

Fuels (excluding feedstocks) Distillate Oil

**Heating value** HHV (higher heating value)

Total fuel MWh consumed by the organization 25124300

MWh fuel consumed for self-generation of electricity 0

MWh fuel consumed for self-generation of heat 0

MWh fuel consumed for self-generation of steam <Not Applicable>

MWh fuel consumed for self-generation of cooling <Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

**Emission factor** 73.25

Unit kg CO2 per million Btu

#### **Emissions factor source**

U.S. EPA Part 98 Emission factors: https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors\_mar\_2018\_0.pdf

## Comment

## 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) 11115

Gross electricity generation (GWh)

Net electricity generation (GWh) 66466

Absolute scope 1 emissions (metric tons CO2e) 65541610

Scope 1 emissions intensity (metric tons CO2e per GWh) 986

## Comment

Capacity and emissions are equity adjusted.

## 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)  $_{0} \label{eq:constraint}$ 

## Comment

Lignite was included in the total coal figures above.

### Oil

Nameplate capacity (MW) 258

## Gross electricity generation (GWh)

## Net electricity generation (GWh)

2.75

## Absolute scope 1 emissions (metric tons CO2e) 4941

Scope 1 emissions intensity (metric tons CO2e per GWh) 1794

## Comment

#### Gas

Nameplate capacity (MW) 24595

Gross electricity generation (GWh)

# Net electricity generation (GWh) 100215

Absolute scope 1 emissions (metric tons CO2e) 39976813

Scope 1 emissions intensity (metric tons CO2e per GWh) 399

### Comment

Capacity and emissions are equity adjusted.

### 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)  $_{0} \ensuremath{\mathbf{0}}$ 

#### Comment

Vistra has no biomass generation.

#### 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)  $_{0} \label{eq:constraint}$ 

## Comment

Vistra has no waste (non-biomass) generation.

#### Nuclear

Nameplate capacity (MW) 2300

## Gross electricity generation (GWh)

Net electricity generation (GWh)

## 19305

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

## Comment

Vistra's Comanche Peak power plant is carbon free generation.

## 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)

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)  $_{\rm 0}$ 

### Comment

Vistra has no geothermal generation.

## 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

Vistra has no hydropower generation.

## 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

Vistra has no wind generation, rather Vistra purchases wind power through power purchase agreements.

## Solar

Nameplate capacity (MW)

180

Gross electricity generation (GWh)

## Net electricity generation (GWh)

439

## Absolute scope 1 emissions (metric tons CO2e)

0

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

## Comment

Vistra's solar facility is zero emissions generation.

#### 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

Vistra has no marine generation.

#### 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

Vistra has a 10MW/42MWh battery energy storage system located at its Upton Solar facility in Upton County, TX. The battery's capacity and generation are included in the solar figures provided above.

#### 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

Vistra has no other non-renewable generation.

## Total

Nameplate capacity (MW) 38448

Gross electricity generation (GWh)

#### Net electricity generation (GWh) 186429

### Absolute scope 1 emissions (metric tons CO2e) 105523364

Scope 1 emissions intensity (metric tons CO2e per GWh) 566

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
Nuclear	8500000	9	2020	The CAPEX planned is the estimated spend of Nuclear Fuel for 2020 for our carbon free nuclear facility.
Other, please specify (Battery)	272000000	30	2020	The CAPEX panned is the estimated spend on our Moss Landing battery energy storage development in 2020.
Other, please specify (Fossil Fuel and Nuclear)	55000000	61	2020	The CAPEX panned is the estimated spend on maintenance and efficiency projects at our fossil fuel and nuclear facilities in 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	Vistra retail offers a variety of renewable product offerings for its customers, including distributed generation. Through its partner, Sunrun, TXU Energy offers its offers residential customers the market's highest-efficiency rooftop solar panels. Vistra also offers a community solar product in Texas for our residential customers (TXU Solar Club.) For its large business customers, Vistra's large business retail team provides solutions to meet customer's sustainability goals ranging from purchasing renewable energy credits to onsite renewable generation development to energy efficiency and advisory services.	0	0	2020

## 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 Iow-carbon R&D	Comment
Row 1	No	
	·	

## 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)	No third-party verification or assurance	
Scope 3	No emissions data provided	

## 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 Deloitte GHG Review Report Vistra\_June 5.pdf

Page/ section reference

All pages

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, we do not verify any other climate-related information reported in our CDP disclosure

## 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 Massachusetts state 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 1.8

% of Scope 2 emissions covered by the ETS 0

Period start date January 1 2019

Period end date December 31 2019

Allowances allocated

Allowances purchased 7255900

Verified Scope 1 emissions in metric tons CO2e 1945366

Verified Scope 2 emissions in metric tons CO2e 0

**Details of ownership** Facilities we own and operate

Comment

Massachusetts state ETS

% of Scope 1 emissions covered by the ETS 1.4

% of Scope 2 emissions covered by the ETS

0 **Period start date** January 1 2019

Period end date December 31 2019

Allowances allocated 260000

Allowances purchased 1562249

Verified Scope 1 emissions in metric tons CO2e 1504920

Verified Scope 2 emissions in metric tons CO2e 0

Details of ownership Facilities we own and operate

Comment

The emissions are equity adjusted.

#### **RGGI - ETS**

% of Scope 1 emissions covered by the ETS 6.7

% of Scope 2 emissions covered by the ETS

0

Period start date January 1 2019

Period end date December 31 2019

Allowances allocated

0

Allowances purchased 24027000

Verified Scope 1 emissions in metric tons CO2e 7085266

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

The emissions are equity adjusted.

## C11.1d

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

Vistra advocates for and believes a national, economy-wide carbon fee and dividend approach with a border carbon adjustment is the ideal public policy solution to appropriately incentivize investments in carbon-free and carbon-reducing technologies while mitigating the financial impacts on the economically disadvantaged. At a regional level, Vistra believes market-based solutions such as RGGI are the appropriate way to incentivize investments in lower emitting technologies as opposed to policies that subsidize specific resources. Vistra complies with all laws and regulations applicable to its operations.

## 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

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

#### GHG Scope

Scope 1

### Application

When Vistra evaluates power generation investments, the multiples applied by Vistra's team to value opportunities take into account carbon intensity and useful life. Lower emitting investments are prescribed higher multiples recognizing the higher value of low carbon investments.

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

#### Variance of price(s) used

Variances in carbon prices and valuations are applied taking into account the location/region and type of investment.

#### Type of internal carbon price

Shadow price

### Impact & implication

Our internal processes incentivize investments in low carbon resources as those resources would be valued with a higher terminal multiple. Using a higher terminal multiple improves the valuation profile of renewable resources making them more attractive investment options as compared to investments in thermal resources.

#### C12. Engagement

## C12.1

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

Yes, our customers

Yes, other partners in the value chain

## 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

100

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

#### Portfolio coverage (total or outstanding)

<Not Applicable>

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

Vistra Retail runs campaigns for all its products and services, including its green, conservation focused products. These campaigns include information about the product benefits, such as environmental stewardship through solar procurement. Vistra retail also engages its customers on energy efficiency tips and tricks through communications on its social media platforms and customers monthly invoices. Vistra's large business markets team engages with its large commercial and industrial (C&I) customers about its custom solutions that help these C&I customers achieve their own sustainable goals, such as reduction of Scope 2 emissions from purchased electricity. The business markets team also offers rebates to customers who make energy-efficiency improvements to their facilities. For example, Cinemark, a movie theater chain and TXU Energy customer in Texas, received Greenback rebates for a LED retrofit of one of their theater parking lots. The partnership between TXU Energy and Cinemark not only allowed Cinemark to reduce power consumption in their parking lot by 70%, but also made their parking lot safer and brighter for their customers.

#### Impact of engagement, including measures of success

The impact of engagement is variable with each campaign and product offering; enrollment rate of products, high renewal rate, and positive feedback are just some measures of success.

### C12.1d

#### (C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Vistra has interactions and engagement on its ESG-related activities with other stakeholders including, investors, other financial community participants, employees, recruits, local communities, consultants, state and federal governments, regulators, and non-governmental organizations. Some examples of stakeholder engagement activities we undertake on an annual basis include frequent meetings and calls with members of the financial community, regulators, and state, local, and federal government officials; employee town halls; and local community town halls.

## 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

## 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
Carbon tax	Support	In 2019, we joined the Climate Leadership Council (CLC) as a founding member, advocating for a consistently applied carbon fee and dividend appropach as the ideal public policy solution to appropriately incentivize investments in carbon-free and carbon reducing technologies while mitigating the financial impacts on the economically disadvantaged. We further committed to contribute \$1 million to Americans for Carbon Dividends (AFCD), the advocacy arm of the CLC.	Vistra believes the CLC's bipartisan climate roadmap, which promotes a national carbon dividend framework, is the right public policy solution to facilitate the country's transition to a lower carbon future while maintaining the strength of the American economy.
Clean energy generation	Support	Vistra supports legislation filed in the Illinois General Assembly by State Senator Michael Hastings and State Representative Luis Arroyo, which the company views as a visionary and comprehensive transition plan for its subsidiaries' central and southern Illinois coal plants.	The Illinois Coal to Solar and Energy Storage Act is a bold and visionary proposal to expand and deploy renewable energy technologies at existing power plant sites across the central and southern Illinois. The plan calls for the reinvestment of over \$450 million at 10 power plants to immediately develop approximately 300 megawatts (MW) of utility-scale solar projects and approximately 150 MW of new energy storage facilities. This investment will support approximately 2,000 union construction jobs and provide a new or enhanced tax base for local plant communities for decades to come. The renewable and emission-free electricity infrastructure will be located at the site of repurposed or existing coal power plants and will start coming online as early as 2022/2023 and no later than 2025. Currently, Illinois only has approximately 400 MW of large-scale solar facilities and 130 MW of energy storage capacity. The Act incentivizes an immediate infusion of over \$450 million in renewable energy infrastructure and southern Illinois to increase the state's renewable energy portfolio and help achieve its emission reduction commitments.

## 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 advocates for policy that supports competitive wholesale electricity markets which foster innovation and sustainable environmental progress.

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

Vistra is in regular dialogue with EPSA regarding the various climate change positions supported by the organization. Our CEO, Curt Morgan, is currently the Chair of the EPSA Board. We advocate for policy solutions, such as a carbon dividend framework, to achieve our nation's shared energy, environmental, and economic goals.

#### Trade association

Nuclear Electric Institute (NEI)

#### Is your position on climate change consistent with theirs?

Consistent

## Please explain the trade association's position

NEI recognizes that nuclear energy can play an important role in meeting the nation's growing energy needs, as it is a carbon-free generation source. NEI drives policies that promote safe and beneficial uses of nuclear energy.

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

Vistra consistently advocates for a national carbon regime, such as a carbon dividend framework with a border carbon adjustment, as the best public policy to achieve the nation's decarbonization goals in a competitive and cost-effective manner. Vistra advocates for this framework in the NEI forum as well.

## 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?

Day to day oversight of all legislative and regulatory policy are handled by Vistra's Government Affairs and Regulatory teams. All strategy and communication regarding policy positions are coordinated among Vistra's Government Affairs, Regulatory, Legal, and Communications teams with executive leadership review and approval. Strategy is shared with the company's Management Committee which consists of the chief executive officer and his direct reports, as well as leaders who represent key business areas and support functions. The Management Committee provides the forum for information sharing, prioritization, and cross-business and cross-functional coordination.

## 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 voluntary sustainability report

#### Status Complete

Attach the document VST-2019-Sustainability-Report.pdf VST-2019-Sustainability-Report.pdf

# Page/Section reference

#### All

## **Content elements**

Governance Strategy Risks & opportunities Emissions figures Emission targets Other metrics

## Comment

Publication In voluntary communications

Status Complete

Attach the document GHG-Target-2050-FINAL.pdf

Page/Section reference

## Content elements

Emissions figures Emission targets

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.

## 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	Vice President of Investor Relations and Chief Sustainability Officer	Chief Sustainability Officer (CSO)

## 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
I am submitting my response	Investors	Public

## Please confirm below

I have read and accept the applicable Terms