

C0. Introduction

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 4.3 million residential, commercial, and industrial retail customers with electricity and natural gas, Vistra is one of the largest competitive residential electricity providers 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 MW 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, the largest of its kind in the world. 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 Corp. ("VST") operates and beliefs of and assumptions made by VST'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 VST. All statements, other than statements of historical facts, that are presented herein, or in response to questions or otherwise, that address activities, events or developments that may occur in the future, including such matters as activities related to our financial or operational projections, financial condition and cash flows, capital expenditures, 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 VST believes that in making any such FLS, VST'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 VST to execute upon its contemplated strategic, performance, and cost-saving initiatives and to successfully integrate acquired businesses; (iii) the severity, magnitude and duration of extreme weather events (including winter storm Uri), contingencies and uncertainties relating thereto, most of which are difficult to predict and many of which are beyond our control, and the resulting effects on our results of operations, financial condition and cash flows; and (iv) those additional risks and factors discussed in reports filed with the SEC by VST from time to time, including the uncertainties and risks discussed in the sections entitled "Risk Factors" and "Forward-Looking Statements" in VST's annual report on Form 10-K for the year ended Dec. 31, 2020 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, VST 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 VST 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 2020	December 31 2020	Yes	3 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 individual(s)	Please explain
Board-level committee	Vistra's ESG initiatives are governed by the full Vistra board, with oversight of subject matter-specific components delegated to relevant board committees. The Sustainability and Risk Committee oversees corporate risk management, including the management and tracking of environmental risks and opportunities, as well as external sustainability reporting. 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/2020/11/Sustainability-and-Risk-Charter.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	<ul style="list-style-type: none"> 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 Applicable>	Sustainability and climate-related issues are discussed at each scheduled quarterly Sustainability and Risk Committee meeting. The 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, all of which include climate-related initiatives.

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 Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Sustainability Officer (CSO) <i>Chief Purpose and Sustainability Officer</i>	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Risks Officer (CRO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Environmental, Health, and Safety manager <i>Senior Vice President of Environmental Health and Safety</i>	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	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 climate-related 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 Purpose and Sustainability Officer (CPSO) 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 CPSO has a dual role as Senior Vice President of Investor Relations providing the benefit of communicating directly with stakeholders, including investors, regarding Vistra's sustainability disclosures.

The CPSO 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 CPSO 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 CPSO 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 CPSO 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 Senior Vice President of Environmental Health and Safety, reporting to the Executive Vice President and General Counsel, is responsible for the day to day management and oversight of environmental reporting, performance, and compliance as well as employee safety programs. The SVP of Environmental Health and Safety reports quarterly to the Board of Directors on these topics. The CPSO and SVP of Environmental Health and Safety coordinate efforts regarding Vistra's emissions reductions targets and reporting of performance. Vistra's Executive Vice President and General Counsel oversees the governance and compliance of the organization, in addition to all legal matters.

C1.3

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

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

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Company performance against a climate-related sustainability index	In furtherance of the company's continued focus on ESG initiatives, the Social Responsibility and Compensation Committee of the board approved a new ESG Index as part of Vistra's 2021 Executive Annual Incentive Plan scorecard with a 10% weighting. The performance of the company on the categories measured by the ESG Index will factor into the short-term incentive compensation for all employees in the organization. To align management's compensation with Vistra's important ESG and DEI goals, the ESG Index measures: • GHG emissions reduction targets tracking to achieve 60% reduction by 2030 and net-zero by 2050, • GHG-related advocacy efforts, • DEI initiatives, including the implementation of various DEI programs, training and reporting enhancements, and updated recruiting efforts, and • Supplier diversity expansion
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 2021 included the 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 • Assessing and enhancing ESG disclosures and reporting • 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 with a detailed analysis performed on an annual basis. During the annual process, risks are evaluated across a matrix based on the likelihood of occurrence over several time horizons and severity or potential financial impact to the business. New risks are added, outdated risks are removed, and current risks can be recategorized during the process. All risks identified are then provided two ratings: (1) a residual rating, reflecting the potential impacts of the risk, assuming that existing mitigating processes and controls remain in place, and (2) an inherent rating, which is the rating of the risk without any existing mitigants. 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 every quarter 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 business. Vistra applies this established risk management process to its evaluation of current and emerging climate change trends and their associated physical, regulatory, and market risks. Not only does this 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. In 2020, Vistra engaged a third-party agency to conduct a climate scenario analysis, evaluating both physical and transition risks to the business over the next 10 to 30 years. This climate scenario analysis was one input Vistra utilized to help inform the assessment of physical risks and transition risks Vistra could be challenged with between now and 2030 and now and 2050 as a result of climate change and the decarbonization of the economy. Vistra considers the identified physical and transitional climate-related risks throughout its strategic corporate planning process including evaluating physical risks of assets when making investment decisions or maintenance upgrades, and also when making decisions on the useful life of its existing fleet. An example of Vistra's risk management process at work is when Vistra was faced with the U.S. Environmental Protection Agency's (EPA) final ruling on coal combustion residual (CCR) in 2020. Vistra is subject to extensive environmental regulation by governmental authorities, including the EPA and state environmental agencies and/or attorneys general. 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 rule allows existing CCR surface impoundments to continue to operate for the remainder of their operating life, but generally would require closure if groundwater monitoring demonstrates that the CCR surface impoundment is responsible for exceedances of groundwater quality protection standards or the CCR surface impoundment does not meet location restrictions or structural integrity criteria. Vistra managed this emerging regulation risk through its risk management process, regularly estimating the likelihood and potential magnitude of a final rule on Vistra's enterprise value through consultation with the appropriate internal and external experts. Based on these reviews, Vistra placed the risk on its risk matrix in the appropriate location, which could change from period to period as the facts and circumstances evolve over time. The risk matrix is also shared with the Board of Directors. The EPA finalized the rule in July 2020, with the final rule allowing a generation plant to seek the EPA's approval to retire a plant by either 2023 or 2028 (depending on the size of the impoundment) as a means of compliance. Vistra reviewed each of its coal plants and estimated the level of capital expenditures that it believed would be necessary for compliance in order to determine whether it would be economic to make such investments or if it would be more prudent to declare retirement based on the estimated economic impact of each decision to the business. Vistra ultimately made the decision to retire seven coal plants between now and 2027.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current regulation is always considered in 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 regulation 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 curtailments.
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, the Biden administration is looking at ways to transition the U.S. to a net-zero carbon economy, including potentially evaluating the institution of a nationwide carbon tax. Vistra's market fundamentals and analytics team have evaluated how a nationwide carbon tax could impact Vistra's business. Vistra's management team takes this analysis into account when making various business decisions, including when evaluating the appropriate level of maintenance capex for our generation assets.

	Relevance & inclusion	Please explain
Technology	Relevant, always included	Technology 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. Vistra takes a comprehensive approach to innovation, involving a variety of internal teams, external stakeholders, and industry partners. Vistra is focused on piloting and deploying new technologies as well as finding new products and approaches to best serve our customers. For example, Vistra announced a collaboration with the Southwest Research Institute (SwRI) and Malta Inc. on a Department of Energy funded study to advance clean power generation. The project will study how Malta's energy storage system can improve the environmental and economic performance of a natural gas-powered power plant, help to balance the diverse power generation on electric grids, and improve the reliability and resiliency of the electric system as more intermittent renewables come online.
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, uranium, 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. Vistra plays an active role in the markets it operates in, to ensure the sustainability of its business. An example is after Winter Storm Uri hit in Texas in early 2021, the Texas legislature asked for proposals around market reform. Vistra submitted numerous proposals and is in constant communication with the public utilities commission of Texas and the grid operator, ERCOT, in discussing ideas to ensure reliability with the dual goal of keeping costs low for customers.
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. Vistra manages this reputational risk by annually calculating its progress toward the achievement of its GHG emissions reduction targets and transitioning its generation fleet, from one that was coal heavy to one that is low-to-no carbon. Vistra communicates its current strategy to investors and other third parties on a regular basis through both the publication of its annual Sustainability Report as well as through countless one on one conversations. Recognizing the importance of achieving these emissions reduction targets to its third party constituents, Vistra regularly communicates any changes in its strategy to these third parties with the relevant explanation. Vistra is targeting a 60% reduction in its CO2e emissions by 2030 and seeks to achieve net-zero by 2050. Through the retirement of fossil fueled assets and the investment in renewable power generation, Vistra has achieved 76% of its 2030 target and is on track for net-zero by 2050.
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 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. Vistra recently experienced this when Winter Storm Uri, an unprecedented winter weather event, hit Texas in early 2021. Though a confluence of events occurred, Vistra was financially impacted mainly from fuel deliverability issues and the incredibly high costs to procure gas. In response to this event, Vistra has taken actions to improve its risk profile for future weather driven volatility events. Such actions include procuring incremental gas storage, adding dual fuel capabilities at its gas peaking units, investing capital to enhance the winterization of its generation fleet, and carrying incremental open length into certain peak periods. In addition, Vistra is taking an advocacy position on various market reform opportunities that could further improve the risk profile.
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. Vistra evaluated chronic physical risks in a climate scenario analysis. Under all scenarios, even the most extreme business as usual case, Vistra's generation facilities are well-positioned to withstand a variety of weather events including: rising sea and river levels, droughts, and increasing temperatures. While we cannot control weather events, Vistra does make informed decisions on capital spend at our facilities to help position our assets to withstand the potential long-term impacts of climate change. For example, rising mean temperatures can increase river and lake water temperatures that our thermal facilities use for cooling during the electricity generation process. Recent capital expenses at some of these facilities included spend on maintenance and improvements to our cooling towers that recycle and cool the water thus mitigating the potential risk of rising water temperatures to such a de minimus amount that we do not deem this physical risk material to our operations. Additional improvements include inlet chillers and coolers of the air combusted in our gas turbines which lower the temperature from ambient conditions.

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
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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

Over the last several years, the U.S. Congress has considered and debated several proposals intended to address climate change using different approaches, including a cap on carbon emissions with emitters allowed to trade unused emission allowances (cap-and-trade), a tax on carbon or GHG emissions, incentives for the development of low-carbon technology and federal renewable portfolio standards. In addition, several states have enacted or are considering the enactment of legislation and/or regulations in support of zero carbon emissions electric generation resources and/or the reduction of such emissions. We could be materially and adversely affected if new federal and/or state legislation or regulations are adopted to address global climate change that could require efforts that exceed or are more expensive than our currently planned initiatives or if we are subject to lawsuits for alleged damage to persons or property resulting from GHG emissions. In January 2021, President Biden issued written notification to the United Nations of the U.S.'s intention to rejoin the Paris Agreement, effective in February 2021. Although the Paris Agreement does not create any binding obligations for nations to limit their GHG emissions, it does include pledges to voluntarily limit or reduce future emissions, and various corporations, investors and U.S. states and local governments have previously pledged to further the goals of the Paris Agreement. Additionally, the Biden Administration has directed certain agencies to submit a plan to the National Climate Task Force to achieve a carbon-pollution-free electricity sector by 2035. The Company's plan to transition to clean power generation sources and reduce its GHG emissions may not be completed in this timeframe and we may not otherwise achieve our sustainability and emissions reduction targets as expected. Accordingly, we may be required to accelerate or change our targets, incur additional expenses, and/or adjust or cease certain operations as a result of newly implemented federal and/or state regulations to reduce future carbon emissions.

Time horizon

Long-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)

1000000000

Explanation of financial impact figure

Estimated range on the impact to Vistra's enterprise value if there was implementation of federal and/or state regulations that would result in an acceleration of emission reduction targets, causing earlier than expected retirements of Vistra's remaining thermal assets.

Cost of response to risk

500000000

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. The amount of average capital invested could increase with supportive public policies and incentives to promote renewable development to achieve federal and/or state emission reduction targets. These growth investments will generate EBITDA that will, over time, replace EBITDA as our thermal resources retire or reduce their output.

Comment

Vistra is supportive of the Paris Agreement and has joined SBTi's Business Ambition for 1.5°C to align our emissions reduction targets with the Paris Agreement to keep warming to 1.5°C and reaching science-based net-zero emissions by 2050. Further, we are supportive of the U.S. setting an ambitious Nationally Determined Contribution (NDC) climate target of at least a 50% reduction by 2030 as compared to a 2005 baseline and setting a path to reach net-zero emissions by 2050. Vistra believes that with the appropriate and supportive public policy, net-zero carbon emissions is achievable.

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 on 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 transportation industry. GHG emissions from the combustion of fossil fuels, primarily from 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. Further, there has been growing attention from large investment firms and their investors in sustainable investing, the investment strategy that considers environmental, social, and governance (ESG) criteria to generate both financial

returns and social impact. This strategy can drive investment decisions based on investors' perceived impact of our business on the environment. 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. Further, Vistra's carbon abatement strategy depends on supportive policies and new technologies. If supportive policies are not implemented and/or the pace of innovation is too slow causing a hinderance to or the unsuccessful achievement of our long-term emission reduction goals and portfolio transformation, increased damage to our reputation could incur and in turn impact our access to capital and/or increase our cost of capital. 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

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)

100000000

Potential financial impact figure – maximum (currency)

1000000000

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

500000000

Description of response and explanation of cost calculation

To respond to the market's concerns, Vistra must make capital investments to transition the business away from carbon-heavy generating resources and transform the perception of the company to be a leader in renewable power. 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.

Comment

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.

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

Vistra is actively transitioning its generation fleet toward low-to-no carbon-intensive sources while supporting its customers and communities and prioritizing a Just Transition. However, this transformation will take time and the various steps the company may take to support all of its stakeholders may not be sufficient to fully address market sentiment on this issue. 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 estimated 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

Likely

Magnitude of impact

High

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)

Potential financial impact figure – maximum (currency)

6500000000

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 is already facing this stakeholder concern and believes Vistra's enterprise value currently reflects a valuation discount 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

500000000

Description of response and explanation of cost calculation

Vistra believes through the transformation of its generation portfolio away from fossil-fueled assets to renewables, the market may re-rate the business prescribing higher multiples to the enterprise. 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. Vistra is also evaluating other strategic alternatives to accelerate its renewable transition.

Comment

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 grid, 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.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology	Transitioning to lower emissions technology
------------	---

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

Carbon sequestration, hydrogen, and the advancement of low-to-no carbon technologies are needed to achieve net-zero carbon emissions in the utility and power sector. 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, hydrogen, micro turbines, photovoltaic (solar) cells, batteries and concentrated solar thermal devices, along with improvements in traditional technologies. Such technological advances may be superior to, or may not be compatible with, some of our existing technologies, investments and infrastructure, and may require us to make significant expenditures to remain competitive. Moreover, such technological advances have reduced, and are expected to continue to reduce, the costs of power production or storage, which may result in the obsolescence of certain of our operating assets. Consequently, the value of our more traditional generation assets could be significantly reduced as a result of these competitive advances, which could have a material adverse effect on us and our future success will depend, in part, on our ability to anticipate and successfully adapt to technological changes, to offer services and products that meet customer demands and evolving industry standards. Additionally, increased governmental and consumer focus on energy sustainability efforts, including desire for, or incentives related to, the development, implementation and usage of low-carbon technology, may result in decreased demand for the traditional generation technologies that we currently own and operate.

Time horizon

Long-term

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)

1000000000

Explanation of financial impact figure

Estimated range on the impact to Vistra's enterprise value if new technologies accelerate at a faster pace than we currently expect or have the opportunity to respond, causing earlier than expected retirements of Vistra's remaining thermal assets.

Cost of response to risk

500000000

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. To remain competitive, Vistra may have to increase its capital expenditures on growth investments more than the already expected average of \$500 million of equity per year.

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	Other, please specify (Increase in extreme hot and cold temperatures)
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Primary potential financial impact

Increased direct costs

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 natural disasters and sustained extreme cold or hot temperatures, which could stress our generation facilities and grid reliability, limit our ability to procure adequate fuel supply, or result in outages, damage or 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 grid outages, downed wires and poles, or damage to other operating equipment, which could result in us foregoing sales of electricity and lost revenue. Extreme weather can also result in (i) unexpected increases in customer load, requiring our retail operation to procure power at wholesale prices in excess of customer sales prices for electricity, (ii) the failure of equipment at our generation facilities, (iii) a decrease in the availability of, or increases in the cost of, fuel sources, including natural gas, diesel and coal, or (iv) unpredictable curtailment of customer load by the applicable ISO/RTO in order to maintain grid reliability, resulting in the realization of lower wholesale prices or retail customer sales. Climate change may produce changes in weather or other environmental conditions, including temperature or precipitation levels, that may impact consumer demand for electricity. In addition, the potential physical effects of climate change, such as increased frequency and severity of storms, floods, and other climatic events, could disrupt our operations and cause us to incur significant costs to prepare for or respond to these effects. Weather conditions 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.

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)

1000000000

Explanation of financial impact figure

Estimated range on the impact to Vistra's enterprise value if a physical weather event were to cause reliability issues, limit ability to procure fuel supply, result in outages at our facilities, and/or require us to procure power at higher prices. Vistra experienced an extreme weather event in Texas, Winter Storm Uri, in February of 2021. Vistra is taking risk mitigation efforts to ensure an extreme weather like Uri will not have as big of a financial impact in the future.

Cost of response to risk

55000000

Description of response and explanation of cost calculation

After the events of Winter Storm Uri, Vistra evaluated its operations and is taking measures to improve its risk profile including: further winterization of its generation fleet, contracting for incremental gas storage, and adding dual fuel capabilities at its steam units, in addition to carrying incremental unhedged generation length into peak periods. The investment in enhanced winterization of its fleet is estimated to cost approximately \$50-\$60 million. The cost of response provided above is the midpoint of this range.

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.

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
---------------------	---------------------------

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

Regulatory policy and legislation that is implemented at the national, regional, and state levels can directly impact Vistra's long-term strategy. As such, Vistra takes an active role in the development of potential or proposed legislation and regulation, advocating for appropriate action in response to climate change. The need to compensate thermal resources appropriately to act as a reliable transition resource as the grid moves to more renewables is imperative to the overall transition of the grid. If energy market structures do not evolve, as federal and/or state clean energy standards are established, to compensate resources appropriately or if market reform does not occur rapidly enough, the asset life of some of our assets could shorten 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

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)

1000000000

Explanation of financial impact figure

Estimated range on the impact to Vistra's enterprise value if policies and market structures are not established to compensate resources appropriately for reliability, causing earlier than expected retirements of Vistra's remaining thermal assets.

Cost of response to risk

501500000

Description of response and explanation of cost calculation

Vistra estimates it spends approximately \$1.5 million on climate advocacy efforts each year. In addition, 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 from our thermal resources as they retire or reduce their output.

Comment

Vistra believes an economy-wide, adequately priced carbon fee and dividend plan with a border carbon adjustment is the ideal public policy solution to advance emissions reduction goals through appropriately incentivized investments in carbon-free and carbon-reducing technologies, while mitigating the financial impacts on the economically disadvantaged. This kind of structure can leverage the attributes of U.S. competitive markets that have resulted in unparalleled prosperity and capital efficiency while preserving the sanctity and equity of the free market system.

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

1800000

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. The cost to realize the opportunity is the additional cost to serve these products (i.e., IT enhancements, billing, etc.). Vistra estimates the maximum cost to serve these products to be approximately 6% of Vistra's margin from these products.

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, commenced commercial operations on the largest battery of its kind in Moss Landing, California at 400-MW/1,600-MWh. In addition, Vistra operates 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 are actively developing nearly 850 MW of solar and storage projects in Texas with another ~1,000 MW under evaluation, and we see potential for over 1,500 MW of energy storage development in California at our existing sites. We are also supporting legislation in Illinois, which would transition retired coal plants in the state to utility-scale solar and energy storage. Vistra continues to evaluate and monitor new power facility technologies and we expect to balance investment in these new technologies with Vistra's commitment to providing safe, efficient, and low-cost power. Vistra estimates it will invest on average \$500 million a year in renewable, storage, and retail assets.

Time horizon

Medium-term

Likelihood

Very likely

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)

90000000

Potential financial impact figure – maximum (currency)

100000000

Explanation of financial impact figure

Reflects potential annual EBITDA generated by \$500M of annual equity investments in growth projects. 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, equating to \$900 million to \$1 billion of total EBITDA contribution over the next 10 years.

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**Identifier**

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 demand—both 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 relatively 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 4.3 million retail electricity customers with affordable, reliable power. Vistra is well-positioned to service future increased demand for electricity. 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

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)

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 currently spends \$500-\$600 million annually on capex to maintain its generation facilities. Vistra management does not believe any incremental spend outside of its existing maintenance capex would be required to capitalize on this opportunity.

Comment**Identifier**

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

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)

250000000

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 annual EBITDA could improve by \$0 to \$250 million upon the initial implementation of policy incentives of this type.

Cost to realize opportunity

500000000

Strategy to realize opportunity and explanation of cost calculation

If policy incentives were implemented that improved our expected returns on growth investments by, we could potentially invest up to \$500 million more than our committed growth of an average of \$500 million of equity per year.

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Other, please specify (Increased reliance on reliable and flexible generation assets)

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

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. Vistra's highly efficient, flexible, and low-emitting natural gas fleet is well-positioned to meet the electricity demands of U.S. consumers as the country continues to transition to lower-carbon technologies while increasing its demand for electricity. The increased dependency on this critical asset could result in increased revenues if future market compensation structures appropriately value this service.

Time horizon

Medium-term

Likelihood

More likely than 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)

100000000

Explanation of financial impact figure

Vistra believes policy changes that would enhance revenue streams designed to maintain the marginal resource required in the market could replace other forms of revenue as markets evolve. Given that Vistra has a fleet of highly efficient CCGTs that can offer reliability and quick start services, changes of this nature could enhance Vistra's enterprise value by up to \$100 million.

Cost to realize opportunity

550000000

Strategy to realize opportunity and explanation of cost calculation

Vistra must keep well maintained facilities ready to generate power when needed. Vistra currently spends \$500-\$600 million annually on capex to maintain its generation facilities. Vistra management does not believe any incremental spend outside of its existing maintenance capex would be required to capitalize on this opportunity.

Comment

C3. Business Strategy

C3.1

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

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

C3.1a

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

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	

C3.2

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

Yes, qualitative and quantitative

C3.2a

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

Climate-related scenarios and models applied	Details
2DS RCP 2.6 RCP 4.5 RCP 8.5 IEA Sustainable development scenario IEA NPS IEA CPS	In 2020, Vistra engaged a third-party agency to conduct a climate scenario analysis, evaluating both physical and transition risks to the business over the next 10 to 30 years. This climate scenario analysis was one input Vistra utilized to help inform the assessment of physical risks and transition risks Vistra could be challenged with between now and 2030 and now and 2050 as a result of climate change and the decarbonization of the economy. The third-party agency specifically utilized climate projections adopted by the Intergovernmental Panel on Climate Change (IPCC) for three scenarios: Sustainable Future Scenario (RCP 2.6, global average temperature rise stays below 2 degrees), 2 Degree Scenario (RCP 4.5, global average temperature rise limited to 2 degrees), and Current Policies Scenario (RCP 8.5, business as usual) to analyze possible weather impacts to Vistra's physical operations under each scenario. In addition, Vistra management reviewed the three scenarios as prepared by the IEA in its 2019 WEO—the Current Policy Scenario, the Stated Policy Scenario, and the Sustainable Development Scenario—to evaluate the potential business implications that could result from various policy and market changes under those climate scenarios. While these scenarios do not predict the future, the analysis of multiple scenarios provided Vistra with a range of outcomes and a diverse set of data to make an informed analysis of how policies, markets, and industry norms could evolve over time, as well as the risks such outcomes could present in the future. By understanding and analyzing the potential impacts and likelihoods of various transitional risks, Vistra is best positioned to make informed decisions regarding how our current strategy could lead to success in an uncertain future.

C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	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 iThermostat, 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, rather Vistra partners with key industry groups, investment firms, suppliers, academic institutions, and government organizations on innovative projects. Vistra has developed relationships with a number of organizations to which Vistra both provides our operational and market expertise and, in return, gains access to valuable insight and collaboration regarding the development and deployment of energy technologies and innovations across the value chain. 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 60% by 2030 and net-zero carbon emissions 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.

C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and investments Access to capital Assets Liabilities	Financial 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 footprint. 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 now 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 derived from renewable assets by 2030. We expect we will achieve this transformation of the supply side of our business through approximately \$5 billion dollars of investments over the next decade. Revenues – Vistra evaluates how its revenues could fluctuate based on market or regulatory changes where it operates as well as based on investments the company intends to make. Any anticipated changes to 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 climate-related impacts. For example, Vistra's retail business estimates what its costs will be to procure the power necessary to serve its customers, which can fluctuate based on supply/demand fundamentals. If geographies where we operate are projected to experience more extreme weather events, the demand for electricity could rise, tightening the supply/demand balance. Similarly, our generation business estimates what its future costs of fuel procurement will be and executes forward purchases based on these expectations. For example, if the United States were to enact a regulatory change that would ban natural gas fracking, the price of natural gas would likely rise. Vistra hedges its fuel exposure in order to mitigate the financial impacts of any near-term fluctuations in fuel prices. Any anticipated changes to direct costs are incorporated into Vistra's five year financial plan. Indirect Costs – Climate-related risks and opportunities can impact Vistra's indirect cost structure. For example, as the importance of climate-related reporting has increased meaningfully in recent years, Vistra now engages a third party auditor to independently verify Vistra's annual greenhouse gas emissions. Any anticipated changes to indirect costs are incorporated into Vistra's five year financial plan. Capital Expenditures – Vistra spends approximately \$500 to \$600 million dollars each year on non-growth capital expenditures, which include the maintenance of its generating assets, nuclear fuel purchases, and environmental expenditures. When spending routine capital, Vistra factors in the expected impacts of climate change and climate-related policies, which influence the estimated useful life of its assets. For example, Vistra retired four coal plants in downstate Illinois in 2019. Leading up to those retirements Vistra spent capital in order to keep the assets operating safely, but not to extend their useful life. Capital Allocation – Vistra makes capital allocation decisions seeking to invest in growth projects only when those projects meet or exceed Vistra's internal investment thresholds. Vistra's capital allocation strategy includes an intent to invest, on average, \$500 million per year on renewable generating assets (both solar and battery) and retail businesses as its portfolio continues to transition toward zero carbon generating assets. This assumption is built into Vistra's 10-year view. Acquisitions and Divestments – Vistra considers climate change and its strategic priority to continue to transition as a low-to-no carbon generator in all of its acquisition and divestment decisions. For example, in recent years Vistra has passed on the opportunity to acquire portfolios of thermal generating resources because the acquisition opportunities presented would not have been in alignment with Vistra's strategic direction. Instead, Vistra acquired two retail businesses in 2019 (Crius and Ambit), which expanded Vistra's retail presence into 19 states plus the District of Columbia. Access to capital – As Vistra continues to transform its company away from coal and lower its emissions intensity, Vistra hopes to gain new investors who have an ESG focus. Investor preferences for companies that are taking steps to mitigate climate change influence Vistra's strategic decisions, as continued access to capital remains important to the company. Assets – Vistra has significant long-lived assets recorded on its balance sheet. The recorded value of these assets can change for a variety of reasons, including climate-related policy and regulatory actions. Vistra regularly evaluates the recorded value of its assets in light of any pending or enacted regulations. Liabilities – Vistra accounts for all anticipated future costs to retire its generating assets (both plants and mines) on its balance sheet. The net present value of these future anticipated cash flows is reported as Vistra's Asset Retirement Obligation (ARO) liability. In addition, Vistra has a separate reporting segment called the Asset Closure Segment, which is managed internally by a Vice President leading a team with the goal to minimize the cost of decommissioning retired plants and reclaiming closed lignite mines.

C3.4a

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

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

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 (%)

60

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

69124235.2

Covered emissions in reporting year (metric tons CO2e)

94623793

% of target achieved [auto-calculated]

75.4070259861624

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain (including target coverage)

Vistra accelerated its GHG emissions reduction targets in 2020 and is now setting out to achieve a 60% reduction, previously 50%, in its Scope 1 and Scope 2 CO2 equivalent (CO2e) emissions by 2030 as compared to a 2010 baseline. 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?

Net-zero target(s)

C4.2c

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

Target reference number

NZ1

Target coverage

Company-wide

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

Abs1

Target year for achieving net zero

2050

Is this a science-based target?

Yes, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

Vistra accelerated its GHG emissions reduction targets in 2020 and is now setting out to achieve net-zero emissions by 2050, previously an 80% reduction as compared to a 2010 baseline.

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	14	
To be implemented*	15	26800000
Implementation commenced*	4	3650000
Implemented*	4	1650000
Not to be implemented	0	

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)

240000

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 2020, this solar facility generated 438,784 MWh of power translating to avoided emissions of ~240,000 metric tons CO2e (calculated using the U.S. EPA's AVERT tool: <https://www.epa.gov/statelocalenergy/avoided-emissions-and-generation-tool-avert>).

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	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 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 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 carbon	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.

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 over 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

0

% 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

Vistra Zero is a generation portfolio comprised of the company's existing nuclear, renewable, and energy storage facilities as well as the company's emission-free renewable projects under development in Texas and California, totaling ~4,000 MW of zero-carbon assets. Vistra Zero generates zero-carbon electricity, powering America toward a clean energy future.

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 (Fossil generation avoided)

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

0

% 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 2020 Vistra earned over 11% of its adjusted EBITDA from its renewable and nuclear generation. Vistra is expanding its renewable and carbon free generation with the development of multiple battery energy storage projects in California and the development of solar and energy storage 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 grid. 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

The base year for Scope 1 GHG emissions is 2010, the year Vistra's last thermal asset was constructed and online. Emissions are reported according to the equity share approach as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. GHG emissions that pertain to the organizational and operational boundaries have been reported for the Company owned buildings and power generation facilities, including facilities that are not required to report direct emissions under the US EPA's Mandatory Reporting Rule, and the Company's real estate financial leases located in the United States.

Scope 2 (location-based)

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO₂e)

248611

Comment

The Scope 2 GHG emissions base year is 2018, the first year Vistra calculated Scope 2 GHG emissions. Emissions are reported according to the equity share approach as defined by the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. GHG emissions that pertain to the organizational and operational boundaries have been reported for the Company owned buildings and power generation facilities, including facilities that are not required to report direct emissions under the US EPA's Mandatory Reporting Rule, and the Company's real estate financial leases located in the United States.

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)

The Greenhouse Gas Protocol: Scope 2 Guidance

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)
94290023

Start date
January 1 2020

End date
December 31 2020

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
105523364

Start date
January 1 2019

End date
December 31 2019

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
118650466

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
143799952

Start date
January 1 2017

End date
December 31 2017

Comment

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

333770

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2020

End date

December 31 2020

Comment

Past year 1

Scope 2, location-based

249068

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2019

End date

December 31 2019

Comment

Past year 2

Scope 2, location-based

248611

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2018

End date

December 31 2018

Comment

Past year 3

Scope 2, location-based

0

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

January 1 2017

End date

December 31 2017

Comment

Vistra did not begin calculating Scope 2 emissions until 2018.

C6.4

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

Yes

C6.4a

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

Source

Mobile 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)

No emissions from this source

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

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 purchased goods and services are not considered material to our overall emissions profile.

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, calculated

Metric tonnes CO2e

440765

Emissions calculation methodology

This represents the emissions associated with wholesale power purchased for resale. The total amount of electricity purchased (in MWh) is multiplied by the emissions factor for the electricity grid subregion as calculated and published by the U.S. EPA.

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

0

Please explain

The amount of MWh purchased for the reporting year is obtained from our commercial operations team who manages the purchase of power.

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 travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

221

Emissions calculation methodology

This represents the emissions associated with air travel completed by employees and booked through Vistra's corporate travel agency. The total distance traveled, in miles, is multiplied by emissions factors as calculated and published by the U.S. EPA for air travel by distance.

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

100

Please explain

Vistra received the log of booked travel and distance from its third-party vendor. Due to travel restrictions imposed during COVID-19, business travel was limited in 2020.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

600

Emissions calculation methodology

This represents the emissions associated with employee commuting via passenger car. The total distance traveled, in miles, is multiplied by emissions factors as calculated and published by the U.S. EPA for passenger car commuting.

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

0

Please explain

Employee commuting was limited in 2020 as Vistra implemented a work from home policy in March of 2020 in response to COVID-19.

Upstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2193

Emissions calculation methodology

This represents the emissions associated with electricity consumption from leased facilities/offices that are not included in Vistra's scope 2 emissions. The total electricity purchased (in MWh) is multiplied by the emissions factors as published in the U.S. Environmental Protection Agency eGRID 2018.

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

0

Please explain

The amount of MWh of electricity purchased and consumed for the reporting year is obtained from our facilities team.

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

Relevant, calculated

Metric tonnes CO2e

2724789

Emissions calculation methodology

This represents the associated emissions from the Use of Sold Products, retail natural gas, as categorized by the Greenhouse Gas Protocol Corporate Value Chain Standard, which is consistent with the target setting criteria developed by the Science Based Targets initiative for electric utilities. The amount of natural gas sold to our retail customers multiplied by the combustion emission factor for natural gas (sourced from the U.S. EPA's April 2021 version of Emission Factors Hub).

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

0

Please explain

The amount of mmbtu sold to our retail customers for the reporting year is obtained from our retail planning team.

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>

Please explain

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

Downstream 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 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 its Scope 1 and Scope 2 emissions.

Other (upstream)

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

There are no other upstream emissions that are material to our overall emissions profile.

Other (downstream)

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

There are no other downstream emissions that are material to our overall emissions profile.

C6.7

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

No

C6.10

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

Intensity figure

0.0083

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

94623793

Metric denominator

unit total revenue

Metric denominator: Unit total

11443000000

Scope 2 figure used

Location-based

% change from previous year

8

Direction of change

Decreased

Reason for change

The decrease was driven by reduced emissions year over year due to the retirement of 4 coal fueled power plants in the MISO Illinois Region. In addition, Vistra's revenue increased, with more revenue coming from low to zero emissions activities. Vistra's intensity for 2019 was 0.009 (2019 gross emissions of 105,772,432 and 2019 revenue of 9,144,000,000).

Intensity figure

0.549

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

94623793

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

172243738

Scope 2 figure used

Location-based

% change from previous year

3

Direction of change

Decreased

Reason for change

The decrease was driven by reduced emissions year over year due to the retirement of 4 coal fueled power plants in the MISO Illinois Region. Vistra's intensity for 2019 was 0.57 (2019 gross emissions of 105,772,432 and 2019 generation of 186,428,605).

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	93822838	Other, please specify (Mandatory GHG Reporting Rule, 40 CFR Part 98)
CH4	174462	Other, please specify (Mandatory GHG Reporting Rule, 40 CFR Part 98)
N2O	292724	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)	93822838	174462	0	94290023	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	94290023

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	94290023

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	94290023	<Not Applicable>	
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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		<Not Applicable >		
Other emissions reduction activities	11233341	Decreased	11	Scope 1 CO2e was reduced primarily by the retirement of 4 coal fueled power plants in November and December of 2019 in the MISO Illinois region. Our total Scope 1 emissions for 2019 was 105,523,364 metric tons CO2e, therefore we arrived at 11% (105,523,364-94,290,023)= 11,233,341 then 11,233,341/105,523,364).
Divestment		<Not Applicable >		
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output		<Not Applicable >		
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other		<Not Applicable >		

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	437562708	437562708
Consumption of purchased or acquired electricity	<Not Applicable>	0	661819	661819
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	0	438224527	438224527

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

(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

219072507

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

53.06

Unit

kg CO2 per million Btu

Emissions factor source

U.S. EPA Part 98 Emission factors: https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_mar2020.pdf

Comment

Fuels (excluding feedstocks)

Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

195579725

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

95.52

Unit

kg CO2 per million Btu

Emissions factor source

U.S. EPA Part 98 Emission factors: https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_mar2020.pdf

Comment

Fuels (excluding feedstocks)

Distillate Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

22910476

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/default/files/2021-04/documents/emission-factors_mar2020.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)

55984

Absolute scope 1 emissions (metric tons CO2e)

56072532

Scope 1 emissions intensity (metric tons CO2e per GWh)

1002

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

Comment

Lignite was included in the total coal figures above.

Oil**Nameplate capacity (MW)**

258

Gross electricity generation (GWh)**Net electricity generation (GWh)**

4

Absolute scope 1 emissions (metric tons CO2e)

5377

Scope 1 emissions intensity (metric tons CO2e per GWh)

1287

Comment

Capacity and emissions are equity adjusted.

Gas**Nameplate capacity (MW)**

24534

Gross electricity generation (GWh)**Net electricity generation (GWh)**

96344

Absolute scope 1 emissions (metric tons CO2e)

38212114

Scope 1 emissions intensity (metric tons CO2e per GWh)

397

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

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

Comment

Vistra has no waste (non-biomass) generation.

Nuclear

Nameplate capacity (MW)

2300

Gross electricity generation (GWh)

Net electricity generation (GWh)

19480

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Vistra's Comanche Peak nuclear power plant is carbon free generation and has no associated Scope 1 emissions.

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

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)**

432

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

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)

38387

Gross electricity generation (GWh)

172244

Net electricity generation (GWh)

172244

Absolute scope 1 emissions (metric tons CO2e)

94290023

Scope 1 emissions intensity (metric tons CO2e per GWh)

547

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	50000000	4	2021	The CAPEX planned is the estimated spend of Nuclear Fuel for 2021 for our zero emissions nuclear facility.
Other, please specify (Solar and Energy Storage)	426000000	38	2021	The CAPEX planned is the estimated spend on our solar and storage development expenditures in 2021.
Other, please specify (Fossil Fuel and Nuclear)	563000000	50	2021	The CAPEX planned is the estimated spend on maintenance projects at our fossil fuel and nuclear facilities in 2021.

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	2021

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

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

Investment in low-carbon R&D	Comment
Row 1 Yes	Vistra partners with key industry groups, investment firms, suppliers, academic institutions, and government organizations on innovative projects. Vistra has developed relationships with a number of organizations to which Vistra both provides our operational and market expertise and, in return, gains access to valuable insight and collaboration regarding the development and deployment of energy technologies and innovations across the value chain.

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

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

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other, please specify (Venture capital fund investing in various low carbon technologies)	Basic academic/theoretical research	≤20%	20000000	In 2020, Vistra made a \$20 million commitment to invest in a new fund managed by The Westly Group, a leading venture capital firm with an established track record of identifying and supporting emerging energy technologies. The Westly Group is focused on investing in early stage companies that are developing new technologies and service offerings related to Smart Energy, Smart Mobility, Smart Buildings, and Industry 4.0. In addition to investing via the Westly Group, we can leverage our position as a leading competitive generator and retailer in the U.S. to partner directly with early stage companies to pilot new technologies and help shape product roadmaps.

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

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

2020 Statement of GHG Emissions.pdf

Page/ section reference

All pages

Relevant standard

Attestation standards established by AICPA (AT105)

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

2020 Statement of GHG Emissions.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

2.1

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2020

Period end date

December 31 2020

Allowances allocated

0

Allowances purchased

13024000

Verified Scope 1 emissions in metric tons CO2e

1984603

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

The emissions are equity adjusted.

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 2020

Period end date

December 31 2020

Allowances allocated

1114361

Allowances purchased

0

Verified Scope 1 emissions in metric tons CO2e

1319685

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

5.4

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2020

Period end date

December 31 2020

Allowances allocated

0

Allowances purchased

21331000

Verified Scope 1 emissions in metric tons CO2e

5087585

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?

One of Vistra's core principles is we do business the right way and we are committed to continuous improvement of environmental protection measures, building on our record of compliance with environmental laws and regulations. Vistra's Environmental, Legal, and Regulatory teams coordinate efforts to ensure that Vistra is adhering and responding to all federal and state environmental regulations. Specifically regarding carbon pricing regulation, 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.

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)

0

Variance of price(s) used

Vistra accounts for the impact of carbon by applying various terminal multiples to valuation analyses as opposed to a straight carbon price per MWh of generation.

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 suppliers
- Yes, our customers
- Yes, other partners in the value chain

C12.1a

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

Type of engagement

Compliance & onboarding

Details of engagement

Code of conduct featuring climate change KPIs

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

0

Rationale for the coverage of your engagement

Vistra has a robust, centralized, strategic supply chain organization. We engage suppliers around the world to support our power generation business and our corporate shared services functions. In 2020, we spent ~\$1.6 billion with ~7,000 suppliers. This includes everything from manufacturers of power generation equipment (such as solar panels, utility-grade batteries, generators, and turbines) to power plant maintenance providers and call center and sales personnel, in addition to other corporate products and services.

Impact of engagement, including measures of success

Our suppliers reflect our values and agree to our supplier code of conduct, found on our website, which was updated in 2020 to include a commitment to environmental stewardship and compliance. With every purchase order, all suppliers must review and agree to Vistra's Supplier Code of Conduct and the commitment to Vistra's core principles.

Comment

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

0.01

% total procurement spend (direct and indirect)

36

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

0

Rationale for the coverage of your engagement

In 2020, Vistra's supply chain and sustainability teams partnered to begin the process of developing a formal Supply Chain Sustainability Initiative. The teams identified an inaugural class of participants, approximately top 1/3 spend of our suppliers, to baseline suppliers reporting of ESG metrics and performance. In addition, we began benchmarking with other similar companies to establish best practices for future implementation.

Impact of engagement, including measures of success

In reviewing the responses to Vistra's annual Supply Chain Sustainability Report, we noticed strong commitments and practices to all ESG facets. In particular, all respondents have a solid governance framework in place with 100% having (i) management oversight of sustainability-related issues, (ii) an environmental and/or sustainability policy in place, and (iii) annually measure and publicly report sustainable information. Further commitments to the environment were noted with the following % of respondents committed to the reduction of: 67% Energy Use, 56% Waste Generation, 44% Water Use. Leading by example, Vistra has engagement plans to connect with those that do not have certain policies or sustainable performance objectives in place, such as GHG emissions reduction goals or a human rights policy, to promote best practices.

Comment

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

100

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

0

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 engagement surveys; 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	Vistra is a founding member of the Climate Leadership Council and its advocacy arm, Americans for Carbon Dividends. Vistra actively supports the CLC's framework of a consistently applied national carbon fee and dividend approach with a border tax adjustment as the ideal public policy solution to appropriately incentivize investments in carbon-free and carbon-reducing technologies.	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. The CLC has estimated that if its plan were to be implemented in 2021, it would cut U.S. CO2 emissions in half by 2035 (as compared to 2005) and far exceed the U.S. Paris commitment.
Clean energy generation	Support	Vistra supports legislation filed in the Illinois General Assembly, the Illinois Coal to Solar & Energy Storage Act (HB 3446 / SB 529), to help the state of Illinois responsibly transition its sources of electricity toward zero-emission generation.	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 ~\$550 million to immediately develop approximately 300 megawatts (MW) of utility-scale solar projects and approximately 175 MW of new energy storage facilities. This investment will support approximately 3,000 full time jobs starting in 2022, generating \$461 million in new earnings for workers. 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 40 MW of large-scale solar facilities and 130 MW of energy storage capacity. The Act incentivizes an immediate infusion of over \$550 million in renewable energy infrastructure across central 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. 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.

All Vistra employees, contractors, interns, and third parties who may be assigned to perform related work or services for or on behalf of Vistra are expected to adhere to Vistra's Lobbying & Political Contributions Policy. This Policy communicates expectations and acceptable business practices for Vistra's activities related to managing interactions and relationships with and contributions to government entities, officials, and other related parties as well as illustrates our commitment to integrity. As outlined in the policy, Vistra reviews all its memberships with trade groups, associations, and other third-party organizations to discern whether their positions, including climate change, are materially inconsistent with Vistra's views. If Vistra determines that a group is taking a materially inconsistent position from the Company's views, the Company will advocate within the organization to seek to align our positions and if that is unsuccessful may withdraw from or otherwise disassociate from that organization.

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

2020 VST Sustainability Report.pdf

Page/Section reference

All

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

Publication

Other, please specify (In voluntary report, incorporating the TCFD recommendations)

Status

Complete

Attach the document

2020 VST Climate Report.pdf

Page/Section reference

All pages

Content elements

- Governance
- Strategy
- Risks & opportunities
- 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	Senior Vice President of Investor Relations and Chief Purpose and 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
