



CLIMATE

REPORT 2021



A report based on the recommendations of the
Task Force on Climate-related Financial Disclosures

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Forward Looking Statement

This report contains certain forward-looking statements, which are subject to various risks and uncertainties. Such forward-looking statements include, among other things, projections related to emission reductions and targets, changes in technology, statements about future business plans and forecasts for planned capital needs.

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Letter From the CEO

Three years ago, our company released our first climate report to explain how we were confronting the risks and opportunities presented by climate change. Much has changed since then — around the world, around the country, and within our company. As a supporter of the Paris Agreement on climate and the Task Force on Climate-related Financial Disclosures (TCFD), Dominion Energy considers it prudent to revisit our climate assessment in light of those changes so communities, customers, investors, and other stakeholders can have the clearest, most up-to-date picture of what our company is doing.

Our goal is to manage climate-related changes in a manner that ensures both a robust response to the challenge of addressing climate change and continued long-term growth for our investors, while continuing to maintain the reliability and affordable rates upon which our customers depend. We are confident we will continue our successful track record in this area.

In February 2020, we announced a new goal: Net Zero carbon and methane emissions for both our electric and gas businesses by 2050. We are well on our way. In 2005, our total share of zero-carbon generation was approximately 35 percent. Today, that figure is approximately 45 percent. Based on current forecasts, we project that the total share of zero-carbon generation should rise to around 70 percent by 2035.

Over the past 15 years we have transformed our company's strategic and operating profile and, in so doing, have achieved significant and purposeful emissions reductions: Since 2005, carbon emissions from company-owned power generation have fallen by 45 percent¹ as measured in accordance with Greenhouse Gas (GHG) protocol methodology. For illustrative purposes only, that percentage reduction would be approximately 10 percentage points higher if it included the impact of the company's strategic divestiture of fossil-based generation during that time (excluded under GHG protocol methodology). By either measure the company is well ahead of the industry average and continuing to take steps to achieve its Net Zero aspirations. Additional highlights include:

- From 2010 through 2019, we cut methane emissions from our natural gas business by 31 percent.²



Bob Blue
Chair, President, and CEO

"In February 2020, we announced a new goal: Net Zero carbon and methane emissions for both our electric and gas businesses by 2050. We are well on our way."

¹ Updated carbon emissions reduction percent progress to date. Per the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard, "for consistent tracking of emissions over time, the base year emissions may need to be recalculated as companies undergo significant structural changes such as acquisitions, divestments, and mergers." To be consistent with this standard, Dominion Energy updated its 2005 baseline year and reduction progress to date. For additional details please see [EEI & AGA ESG/Sustainability Template \(azureedge.net\)](#)

² The company has strategically repositioned itself to focus on its state-regulated, sustainability-focused utility operations as well as highlight the value of our increasingly "green" energy profile. Since the Climate Report is a forward-looking report, we have measured our methane emissions reductions according to the GHG Protocol and adjusted the baselines and emissions by removing divested assets (including the Gas Transmission and Storage assets sold to Berkshire Hathaway Energy in 2020). We have also removed Dominion Energy Questar Pipeline assets in anticipation of a sale in 2021. For additional details please see [EEI & AGA ESG/Sustainability Template \(azureedge.net\)](#)



We aspire to be the most sustainable energy company in America and we embrace rapid decarbonization across our operations.

- In less than a decade we have grown our solar portfolio from zero megawatts to 2,300 megawatts of solar capacity in operation today.
- We have identified up to \$72 billion of decarbonization capital investment through 2035, which we believe represents the largest, broadest in scope, longest in duration, and most visible regulated decarbonization opportunity among U.S. utilities.
- We are developing the largest offshore wind farm on this side of the Atlantic Ocean.
- We have formed the largest renewable natural gas partnership in the country to capture methane from animal waste and turn it into natural gas for customers.
- We are pursuing one of the most cost-effective means to limit greenhouse-gas emissions by extending the lives of our nuclear plants — which provide reliable baseload generation unaffected by weather conditions.
- While we already operate the largest pumped-hydro energy storage facility in the world, we continue to expand renewable-supporting energy storage with battery pilot projects, electric school buses, and exploration of other potential technologies such as hydrogen and advanced nuclear technologies including small modular reactors (SMRs).
- In Utah, we have launched ThermH2, a pilot project that uses a simulated small town to analyze the effect of blending hydrogen into the natural-gas distribution system, and GreenTherm, to provide customers with voluntary access to renewable natural gas. We are seeking to launch both of these pilots in North Carolina.

For the next decade and a half, current technology will support substantial progress towards our commitments. After that, achieving our Net Zero goal will require significant advances in technology, particularly to reduce the cost of long-term energy storage and to develop dispatchable zero-carbon generation, but our strategy relies on realistic expectations, rather than theoretical expedients. Supportive public policy also will be necessary — for example, to ensure adequate infrastructure for high-voltage transmission lines serving renewable generation sources. We know the path forward involves risks — climatic, financial, technological, reliability, and others — as well as opportunities, such as the electrification of transportation and building heat, the use of carbon capture, hydrogen, and renewable natural gas to supplement natural gas, the buildup of renewables, advanced nuclear technology, electric grid modernization, infrastructure replacement programs, and energy storage. The pages that follow explore those possibilities in detail. Taken as a whole, the report demonstrates our commitment to environmental and financial sustainability in the years and decades ahead.

We aspire to be the most sustainable energy company in America and we embrace rapid decarbonization across our operations. However, any serious discussion of the utility industry's role in greenhouse gas

emissions reduction must include a holistic approach that optimally balances enhanced sustainability with our public-service obligation to serve 7 million customers reliably and affordably. As recent events in the United States have gravely demonstrated, utility systems that deliver life-sustaining energy are only as useful as they are resilient under the most extreme operating scenarios. Given the limitations of current commercially available technology, continued technology advancements will play a critical role in achieving our Net Zero goal while preserving reliability and affordability. For Dominion Energy, that means embracing both proven technologies such as quick-start, renewable-enabling generation as well as nascent technologies such as green hydrogen, which together can allow us to continue to decarbonize expeditiously while meeting our public-service mandates. In the meantime, we continue to support the development of science-based solutions to achieve the common objective of the company and its stakeholders: an energy delivery system that provides safe, reliable, affordable, and zero-carbon energy.

This report also represents our commitment to transparency. Greater transparency regarding climate-related risks and opportunities is a competitive advantage. It enables shareholders, customers, and other stakeholders to see alignment between our strategy of building a clean and sustainable energy future, our goal of achieving Net Zero emissions by 2050, and the opportunities arising from a shift to a low-carbon world. These disclosures also demonstrate our efforts to provide investors with consistency when evaluating and quantifying the impact of climate change on our business, as they seek to de-risk their portfolios.

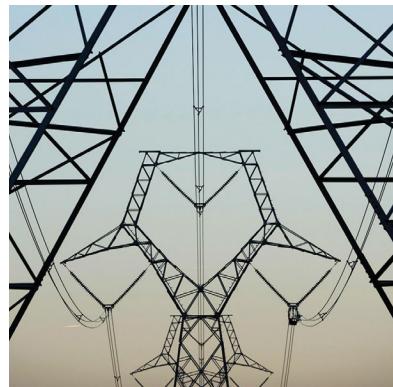
That is why Dominion Energy became a formal supporter of the Task Force on Climate-related Financial Disclosures (TCFD) in 2020, and why we have worked to go above and beyond regulatory reporting requirements — e.g., by disclosing our corporate methane emissions inventory, which includes emissions from smaller sources not covered by the Environmental Protection Agency's Greenhouse Gas Reporting Program rule.

We also show our commitment to transparency through other disclosures — from Integrated Resource Plans filed with regulatory agencies, to our data-rich Sustainability and Corporate Responsibility Report, to disclosures we make as a member of the One Future Coalition and information we share voluntarily with the EPA and nonprofit organizations such as CDP (formerly the Carbon Disclosure Project). Additional disclosures appear in our financial reporting documents and elsewhere.

We have set our sights high. Achieving our goals will not be easy. But we can achieve them — and we will. Actions speak louder, and our actions will back up our commitments.



Bob Blue
Chair, President, and CEO



Utility systems that deliver life-sustaining energy are only as useful as they are resilient under the most extreme operating scenarios.



The company is committed to safe, sustainable, reliable, and affordable energy.

Executive Summary

Headquartered in Richmond, Virginia, Dominion Energy provides electricity and/or natural gas to more than 7 million customers in 16 states. The company is committed to safe, sustainable, reliable, and affordable energy and to achieving Net Zero carbon and methane emissions from its power generation and gas infrastructure operations by 2050.

We made that commitment because we recognize the crisis posed by climate change and the role the energy sector plays in helping to manage it. We understand climate change harms the environment, public health, agriculture, and more, and are incorporating these considerations in our strategy. On the other hand, efforts to mitigate climate change could affect the reliability of the electric grid as well as the interests of other stakeholders, including affordability for our customers. We believe we should be forthright about these complexities and the other climate-related risks and opportunities we will encounter in the years to come.

This report, which follows the recommendations of the TCFD, provides an overview of those risks and opportunities, as well as an analysis modeled on a 1.5-degree scenario consistent with the Paris Agreement, to evaluate a variety of decarbonization pathways for our electric and gas operations. The potential pathways evaluated herein are not meant to be definitive, mutually exclusive, or a circumvention of the regulatory process. Rather, they represent a snapshot in time of an array of scenarios to help assess the considerations related to meeting environmental targets, and to inform our planning

processes. These projections are quite fluid due to anticipated developments in technologies, policies, regulatory requirements, demographics, and other factors affecting energy markets that cannot be predicted with certainty.

Accordingly, this report reflects many forward-looking assumptions with respect to energy market development and costs associated with multiple technology options to support a low-carbon future. Potential key drivers include: public policy changes, market prices, technological advancements, and customer demand. A range of potential outcomes is considered to help understand and evaluate risks and opportunities related to transitioning to our Net Zero target. As the energy industry navigates this transformational period, the evolution of key variables that drive strategy will affect how companies plan and execute strategies to achieve targets and defray the costs associated with those plans. It is imperative that we continually evaluate the changing landscape and refine our plans to ensure success. Unsurprisingly, much of the following discussion is contingent on our best assumptions about the future. We have grounded our assessment in a clear-eyed appraisal of current circumstances and reasonable projections. Future climate reports will build upon the tenets set forth herein and will be adjusted as necessary to accommodate future facts and circumstances.

This report, which follows the recommendations of the TCFD, is composed of the following sections:





**Dominion Energy
is accelerating the
transformation of the
energy sector through
our pursuit of achieving
Net Zero emissions by
2050 in our clean energy
strategy.**

Strategy

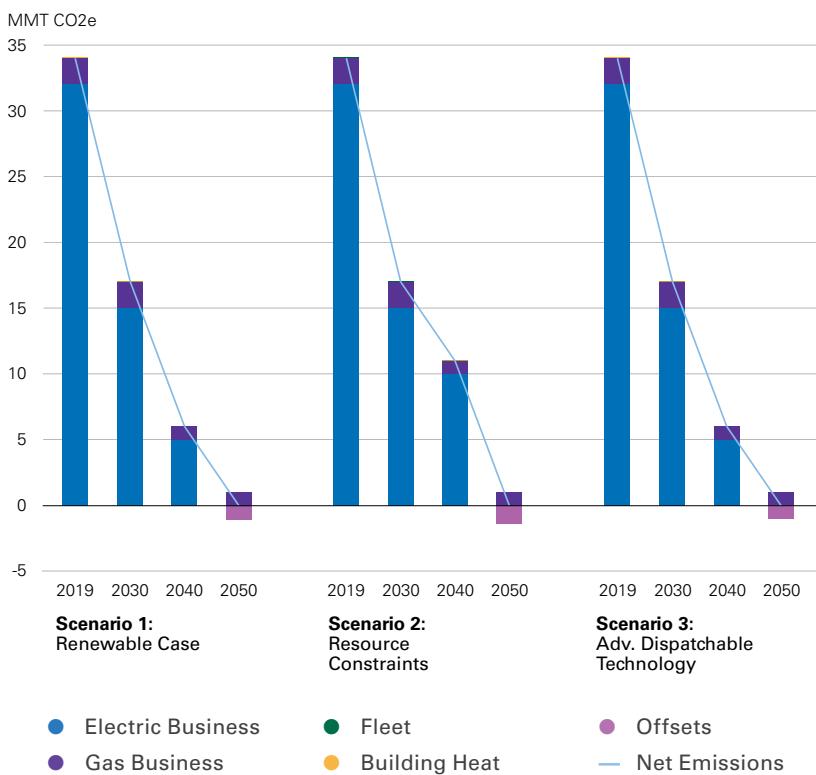
Dominion Energy is accelerating the transformation of the energy sector through our pursuit of achieving Net Zero emissions by 2050 in our clean energy strategy. To that end, we are investing substantially in zero-carbon sources of electricity, as well as methane-reducing renewable natural gas, hydrogen, and other technologies.

As noted above, the details of this strategy are heavily contingent on a host of variables. The evolution of the variables described above will continue to influence the details of our strategy — in particular during the later years. In the meantime, our Integrated Resource Plans (IRPs) provide details about different paths we might follow at the state and business-unit level. Our most recent IRPs — encouraged by state policy — represent a quadrupling of the company's previous forecast for renewable energy generation and storage.

To better understand the contours of all these potential pathways, we separately commissioned a climate scenario analysis consistent with the 1.5-degree aim of the Paris Agreement on climate. The analysis examined three scenarios in which Dominion Energy could reach its Net Zero goal: one heavily reliant on renewables, one in which resources for renewables are constrained, and one in which advanced nuclear technology or another zero-carbon dispatchable resource plays a substantial role.

Exhibit 1

Emission Reduction Scenarios



In all scenario analysis cases, the company is able to achieve its emissions target while preserving a focus on maintaining energy reliability and affordability, abiding by the principles of environmental justice, and seeking to ensure a just transition for workers in legacy industries.

Finally, the company also calculated the emissions across its value chain focusing on the material and relevant Scope 3 emissions for a vertically integrated electric and gas utility. Having this inventory of Scope 3 emissions facilitates our strategy of reducing emissions generated by our suppliers and customers.

Governance

Dominion Energy's Board of Directors is responsible for the company's overall strategy and oversees the company's operations, including those related to climate and sustainability. The Board's Sustainability and Corporate Responsibility (SCR) Committee oversees the company's policies regarding environmental sustainability and climate.

The company's CEO and his leadership team manage strategy and execution. In support of effective climate governance, Dominion Energy operates an executive-level Climate Council, a senior-leadership Climate Working Group, and a Net Zero Team that relies on input from business-unit subject matter experts.





Comprehensive risk management, including the management of financial risk, requires a clear-eyed assessment of the hazards and opportunities presented by climate change.

Risk Management and Transition Opportunities

Comprehensive risk management, including the management of financial risk, requires a clear-eyed assessment of the hazards and opportunities presented by climate change.

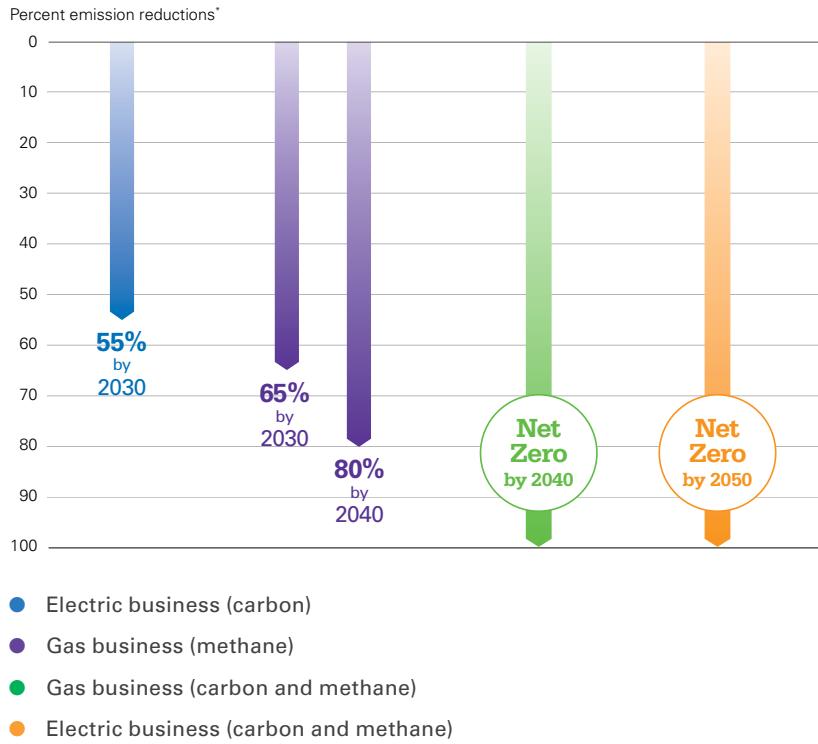
The risks fall into three principal categories: transition risks, physical and climatic risks, and financial risks. The primary transition risks confronting Dominion Energy are those involving public policy — such as restrictions on land use — and the execution of our strategy. Severe weather constitutes the bulk of our physical and climatic risks, while financial risks involve reduced access to capital, or catastrophic loss. In each case, we have policies and/or plans in place to mitigate these risks.

The opportunities attendant upon the clean-energy transition include cost-reducing resource efficiencies; investment in renewable generation and grid transformation; the development of carbon-free, on-demand power sources with which to balance intermittent renewable generation; and new or expanded products, services, and markets, from electric-vehicle charging to tailored electricity service for customers with specific voltage or other requirements.

Exhibit 2

Interim Scope 1 Emissions Reduction Targets

To achieve company-wide Net Zero carbon and methane emissions



*Gas baseline year 2010, Electric baseline year 2005

Metrics and Targets

Dominion Energy has made steady progress toward its interim and ultimate decarbonization goals. From 2005 through 2019, we reduced Scope 1 carbon emissions from electric generation by 45 percent, heading toward a 2030 target of 55 percent and a 2050 target of Net Zero. (Electric generation makes up over 90 percent of our Scope 1 emissions.) From 2010 through 2019, we reduced Scope 1 methane emissions from our gas business by 31 percent, heading toward a 2030 target of 65 percent and a 2040 target of Net Zero.

In light of this analysis, Dominion Energy considers itself well-positioned not only to contend with the risks and opportunities presented by climate change, but also to lead — and benefit from — the transition to clean energy under a variety of different scenarios.

Exhibit 3

2019 Dominion Energy GHG Emissions

Scope 1 Emissions
(MT CO₂e)



Scope 2 Emissions
(MT CO₂e)



Scope 3 Emissions³
(MT CO₂e)



- 92.5% Power Generation¹
- 7.2% Gas Business
- 0.3% Additional Scope 1²

- 100% Third Party Electricity

- 47.3% Customer End Use LDC
- 31.0% Purchased Power
- 14.2% Upstream Fuel Supply Power Generation
- 6.4% Upstream Fuel Supply LDC
- 1.1% Solar Supply Chain Emissions

¹ Power Generation emissions includes CO₂ emissions of 31.7 MMT and methane emissions from the power sector of 0.05 MMT CO₂e.
Gas Business emissions include CO₂ emissions of 0.7 MMT and methane emissions of 1.7 MMT CO₂e.

² Includes vehicle fleet at 0.05 MMT, corporate jet at 0.006 MMT, and building heat at 0.04MT.

³ Includes only those categories shown.



Strategy

At Dominion Energy, our mission is clear: We aim to build and operate a clean and sustainable energy system while continuing to provide our customers with safe, reliable, and affordable electricity and gas around the clock. While our long record of success guides us, in recent years we have embarked on a course that entails substantial investments in clean and renewable energy and sweeping commitments regarding emissions.

In recent years, the company has taken a series of strategic steps intended to position it as a “pure-play” state-regulated utility company, operating in states with positive or constructive business climates. In early 2020, we set a new goal for ourselves: Net Zero carbon and methane emissions by 2050. This aligns with the 1.5-degree goal of the Paris Agreement and covers carbon dioxide and methane from both our electricity and natural gas operations company-wide. Dominion Energy’s strategy centers on enhancing our clean-energy profile — we are pursuing our Net Zero target and executing one of the nation’s largest regulated zero-carbon electric generation and storage investment plans, as well as making significant investments in renewable natural gas and other methane-reduction strategies. This reflects our commitment to sustainability — both environmental and social. We believe we can best respond to the challenges posed by climate change by seeking to accelerate the execution of our strategy over the medium term (through 2035) and long term (2036 to 2050). We are committed to transparency and consistency and believe that all of our stakeholders will benefit from the continued execution of our strategy.



Net Zero

As we work toward Net Zero emissions by 2050, we also will focus on near-term progress. Under our Net Zero strategy, the company is committed to reducing carbon emissions 55 percent by 2030 from our power generation business (compared to 2005 levels). We likewise expect to reduce methane emissions from our natural gas business by 65 percent by 2030 and 80 percent by 2040 (from 2010 levels). Further, the company has committed to invest in carbon-reducing renewable natural gas (RNG) projects in support of our Net Zero commitment.

55%

Reduction in carbon
emissions by 2030
(compared to 2005 levels)



65%

Reduction in methane
emissions from our natural
gas business by 2030



80%

Reduction in methane
emissions from our natural
gas business by 2040



Emissions by Scope³

For purposes of calculating our corporate inventory, the table below presents definitions and examples of direct (Scope 1) and indirect (Scopes 2 and 3) GHG emissions, based on the most relevant and material emission sources for a vertically integrated electric and gas utility:

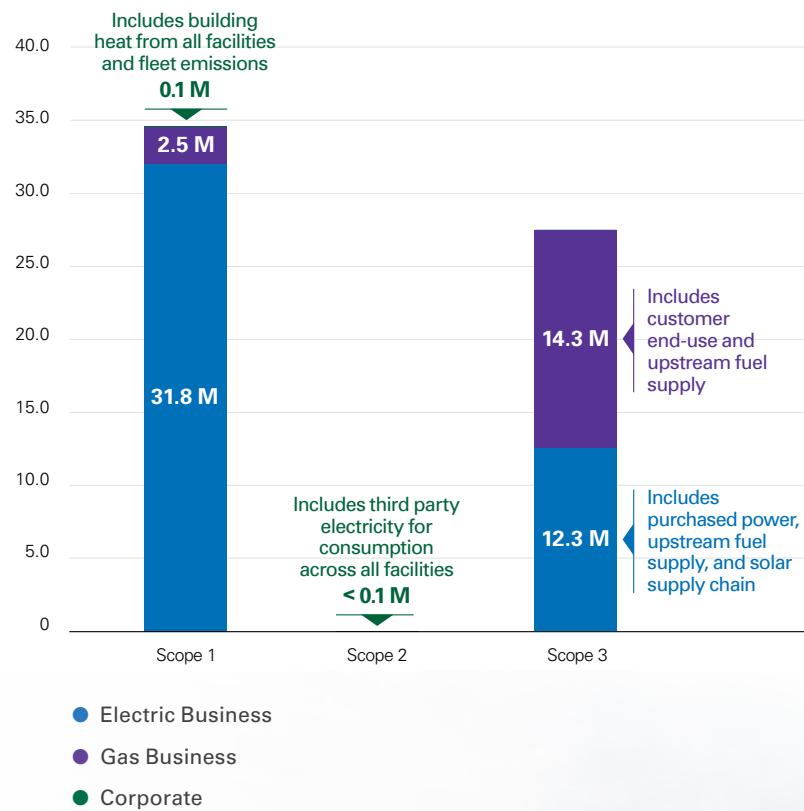
Emissions by Scope	Emissions Source
 A photograph of an industrial facility featuring a tall, light-colored cylindrical chimney or stack structure, surrounded by various pipes, structures, and a clear blue sky.	<ul style="list-style-type: none">• Electric generation: on-site combustion at power plants.• Transmission and distribution: fugitive emissions from the use of sulfur hexafluoride and line losses.• Natural gas operations: on-site combustion and fugitive methane emissions from compressor stations, delivery of natural gas, and production.• Company-owned aircraft and vehicle fleet: combustion of fuels.• Buildings: on-site combustion of fuels for building heat.
Scope 1: Direct emissions from operations in sources owned or controlled by Dominion Energy.	Buildings: electricity used in facilities outside of Dominion Energy's service territory.
 A photograph showing a city skyline with several buildings and a range of mountains in the background under a clear sky.	Fuel and energy-related emissions: <ul style="list-style-type: none">• Purchased power for consumer use (market transactions, power purchase agreements), including transmission losses.• Customer end-use of natural gas (burner-tip) that is owned and sold by Dominion Energy.• Upstream emissions from natural gas extraction, processing, and transportation (well-head).• Upstream emissions from extraction, processing, and transportation of fuels used in electricity generation.• Capital goods (e.g., upstream emissions from manufacturing and transportation of solar panels and wind turbines purchased in a given year).
Scope 2: Indirect emissions from purchased electricity (third-party generation) for use in Dominion Energy facilities.	
 A close-up photograph of a person's hand with a red and yellow beaded bracelet, turning a knob on a black gas cooktop. A blue flame is visible from one of the burners.	
Scope 3: Indirect emissions from upstream and downstream emissions sources not owned or controlled by Dominion Energy that result from company operations.	

³Additional Scope 3 sources of emissions that occur but are not examined in this analysis include: Capital goods (e.g., upstream emissions from manufacturing and transportation of other capital assets purchased in a given year), Purchased goods and services (supply chain), Employee commuting, Business travel, Waste generated in operations and disposed of off-site, Transmission and distribution losses from wheeled power. We are in the process of gathering the inventory of emissions on these sources which are not material to Scope 3.

Exhibit 4

Emissions Across the Dominion Energy Value Chain

CO₂e emissions (MMT) carbon and methane only





Our Integrated Resource Plans provide an informative state-specific view of plausible pathways toward meeting customer needs that incorporate applicable state law and policy.

Integrated Resource Plans (IRPs)

While our climate commitments and clean-energy strategy apply company-wide, our Integrated Resource Plans provide an informative state-specific view of plausible pathways toward meeting customer needs that incorporate applicable state law and policy. For example, Dominion Energy Virginia's 2020 IRP presented plans that include more than 5,000 megawatts of offshore wind, over 15,000 additional megawatts of solar, and 2,700 megawatts of storage — all by 2035. These plans — encouraged by state policy — represent a quadrupling of the company's previous forecast for renewable energy generation and storage. In Dominion Energy South Carolina's 2021 IRP, the company highlights a plan where all or most of its coal generating units are retired over the next decade while maintaining reliability and affordability. The company expects to update its electric businesses' IRPs in North Carolina, South Carolina, and Virginia in 2021. The company also files an annual IRP for its gas business in Utah. The IRPs are a natural part of our transparent evolution towards a sustainable future.

Ninety-three percent of Dominion Energy's Scope 1 direct carbon dioxide equivalent (CO₂e) emissions derive from electricity generation, based on 2019 data. While we have vastly increased the amount of planned renewable generation, we remain laser-focused on delivering reliable service around-the-clock. To that end, we have submitted applications to extend the licenses of our Surry and North Anna Power Stations for an additional 20 years. In May 2021, the Nuclear Regulatory Commission approved our application for Surry. We are evaluating license extensions for our other nuclear stations as well. Any decision to pursue the extension of the operating license for our Millstone Power Station, in particular, would depend on whether public policy and energy markets sufficiently compensate the plant for its zero-carbon, around-the-clock generation and support the long-term operation of the plant. Given the intermittency of wind and solar, we also expect that dispatchable natural gas-fired generation, along with

other solutions that ensure we can meet real-time customer demand fluctuations, will continue to play a critical role in our system until carbon-free, on-demand power sources (including RNG, hydrogen, advanced nuclear power, and gas with carbon capture and storage) become commercially practicable. [Renewable Natural Gas \(RNG\)](#)

We continue to focus on meeting customer needs in a reliable and affordable manner while (a) lowering carbon emissions as fast as possible through the transformation of our generation portfolio, (b) promoting energy efficiency, and (c) transforming our grid for distributed energy resource integration and increasing electrification.

To reduce the emissions from our natural gas system, we are modernizing infrastructure, overhauling procedures to minimize and in many cases eliminate venting for maintenance and repair by adopting innovative technologies such as zero-emission vacuum and compression (ZEVAC®), and expanding leak detection and repair efforts. We are also focusing on significantly expanding energy efficiency programs and reducing upstream emissions related to our gas distribution businesses.

Moreover, we have launched the largest swine farm-based RNG partnership in the country with Smithfield Foods. Our joint venture, Align RNG, captures waste methane from swine farms and converts it into clean, renewable energy to heat homes, power local businesses, and fuel transportation fleets. We also have partnered with Vanguard Renewables to form the first nationwide, dairy-based RNG venture. Combined, these RNG efforts should reduce U.S. agricultural emissions by more than 3,200,000 metric tons a year, the equivalent of taking more than 700,000 non-electric cars off the road for one year or planting more than 53 million trees.

Scenario Modeling and Analysis

Background

Consistent with TCFD framework-recommended disclosures, we engaged an external consultant to perform a 1.5-degree scenario analysis to complement and enhance our internal net zero modeling. The study captures a snapshot of the potential transition from Dominion Energy's current levels of emissions to a greener electric grid and a sustainable natural gas system. The consultant also evaluated our current vehicle fleet and associated emissions and provided potential pathways for converting the fleet to electric power or alternative fuels. Within that snapshot, the study considers alternative approaches or strategies that the company may pursue to achieve its corporate climate goals. The study also provides options available to Dominion Energy to consider in achieving its interim emission-reduction goals and reducing certain upstream and downstream GHG emissions contributions relative to the company's overall GHG footprint. [Metrics and Targets](#)



We have partnered with Vanguard Renewables to form the first nationwide, dairy-based RNG venture.



Potential pathways for converting the fleet to electric power or alternative fuels.

Market Scenario

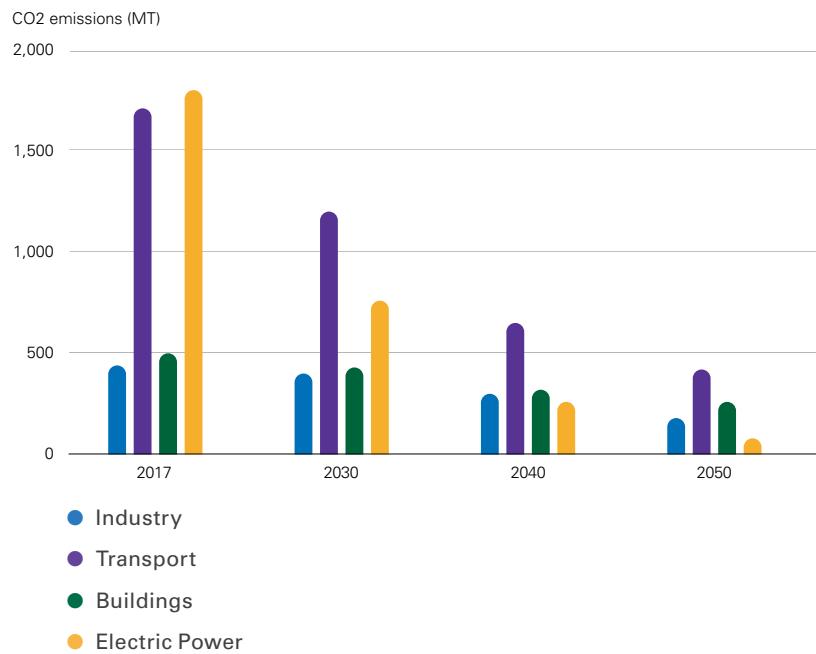
The initial step of the analysis was to establish a “Market Scenario,” a U.S.-wide outlook consistent with achieving the goals of the Paris Agreement. The Market Scenario is the platform for developing U.S. economy-wide energy use projections. It is based on the International Energy Agency’s (IEA’s) Sustainable Development Scenario to reach net zero by 2070. As part of the Market Scenario, the power sector is expected to reach net zero by 2055 while the other sectors reach net zero by 2070.

The Market Scenario reflects the reality that Dominion Energy’s operations do not occur in a vacuum, and external factors can influence the execution of our strategy. For example, the electrification of other economic sectors will affect the demand load on our generation, transmission, and distribution resources.

Accordingly, the consultant established an outlook for energy consumption in the U.S. consistent with the nation’s required contribution to achieving the climate change goals of the Paris Agreement. Based on information available from sources such as the Intergovernmental Panel on Climate Change (IPCC) and the IEA, we developed a scenario in collaboration with the consultant for the U.S. The scenario focused on reducing fossil-fuel emissions related to energy used in the residential, commercial, industrial, transportation, and electric sectors — the sectors that are the largest sources of greenhouse gas emissions in the U.S. related to energy use (see Exhibit 5).

Exhibit 5

Assumed Emissions Reductions Needed by Sector



The main strategies considered to achieve such reductions include decarbonization of the electric grid, fuel switching to cleaner sources (including alternate fuels and electricity), and efficiency improvements. Under the Market Scenario, decarbonizing electricity generation by 2055 is critical to achieving the overall goals, particularly given the assumed electrification in the transportation sector.

Dominion Energy uses the Market Scenario as the backdrop for modeling how our own assets will reach Net Zero by 2050. It does not necessarily form the basis for modeling in our Integrated Resource Plans due to regulatory requirements.

A forward-looking capacity expansion and dispatch analytical tool was used to capture the U.S. economy-wide electric-sector outlook. This outlook is consistent with achieving a zero-CO₂-emission power grid by 2055 and with the IEA's Sustainable

Development Scenario. In the mid-term, gas energy replaces coal energy as coal plants retire or coal generation becomes uneconomic, leading to further significant reductions of coal energy by 2030. Thereafter, energy from gas declines slowly over time as wind and solar generation increase. The model assumes low-, zero-, or negative-emissions sources such as renewable natural gas and green hydrogen are also utilized at gas-fired facilities in the longer term. Renewable generation from wind reflects a mix between onshore and offshore, with roughly 35 percent of the total U.S. wind generation in 2050 deriving from offshore sources. The model assumes that most of the generation mix nationwide will be composed of solar generation. Given this large proportion of intermittent resources, significant storage capacity is added to offset the variability of solar and wind energy output and provide the flexibility needed for reliability and balancing the grid.

35%

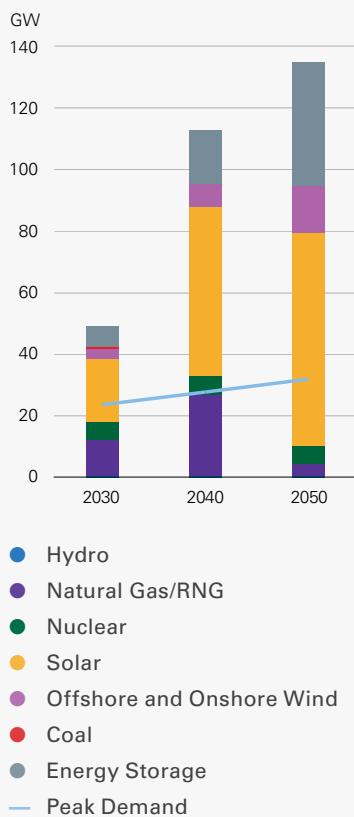
of the total U.S. wind generation in 2050 is expected to be derived from offshore sources.



Exhibit 6

Consolidated Nameplate Capacity (GW)

Renewable Build Scenario



Dominion Energy Net Zero Scenarios

The Market Scenario was used as the national backdrop to model potential pathways for achieving Dominion Energy's commitment to Net Zero by 2050. The three scenarios considered include:

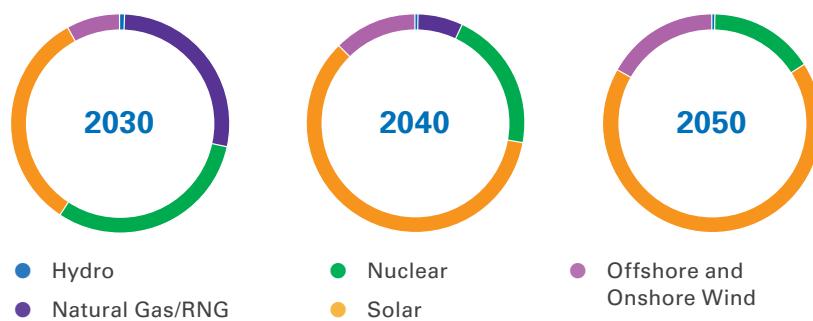
- **Renewable Build Scenario** – utilizes a renewable-intensive generation pathway.
- **Resource Constraints Scenario** – considers possible limits on renewable generation, particularly solar, that could be driven by execution risks including permitting challenges and land availability.
- **Advanced Dispatchable Technology Scenario** – assumes that public policy or incentives enable and/or support new dispatchable zero-carbon technologies. The model relies on small modular reactors (SMRs) as the best current example of such technology and assumes the development of up to 2,400 megawatts of SMRs by 2037 and 600 megawatts every three years thereafter in Virginia.

The Renewable Build Scenario reaches Net Zero through predominantly renewable technology. This pathway considers multiple clean-energy options including intermittent renewable sources, green hydrogen, carbon capture and storage, RNG, and nuclear resources to meet clean-energy goals in Virginia and South Carolina. In Virginia, the potential pathway complies with the Virginia Clean Economy Act. The necessary nameplate capacity increases significantly over time and by 2050 the nameplate capacity is almost five times as large as peak demand in Virginia. This is due to the intermittency of renewables (which may be exacerbated by the co-location of similar resources), the duration of storage, changes in load patterns, and, importantly, the combined effect of these changes.

Exhibit 7

Dominion Energy Consolidated Energy Mix (GWh)

Renewable Build Scenario

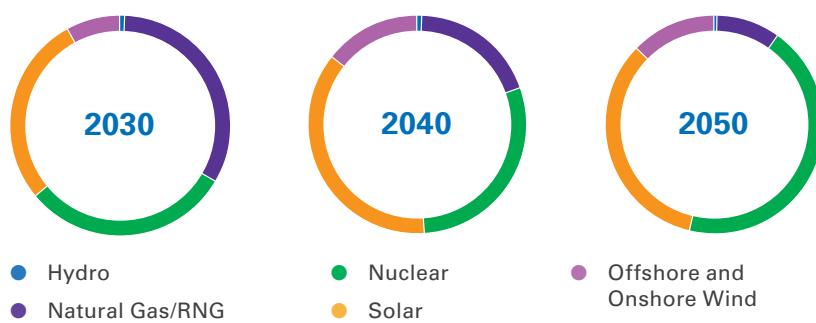


The Renewable Build Scenario would require almost 1,000 square miles of land in Virginia by 2050 — the equivalent of more than 15 times the footprint of the District of Columbia. It will also require hundreds of favorable local land-use decisions. Siting challenges could threaten our renewable-development plans. As more renewables are built, the increasing penetration could lead to further

restrictions on siting projects. Because such restrictions would introduce risk related to the execution of our renewable-development plans, a Resource Constraints Scenario is considered.⁴

Exhibit 9

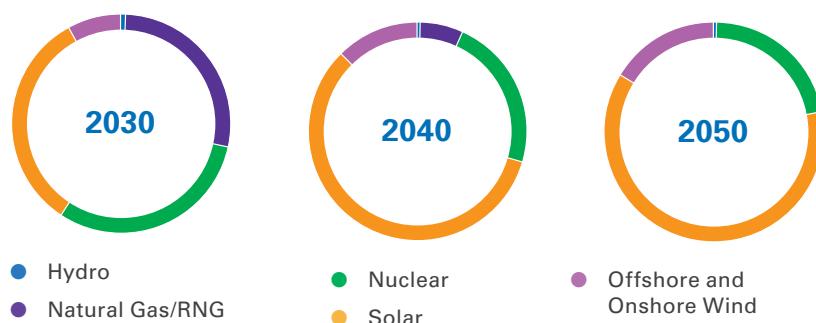
Dominion Energy Consolidated Energy Mix (GWh) Resource Constraints Scenario



Due to the need for zero-carbon dispatchable generation, a third scenario was examined to include SMRs (Small Modular Reactors). These reactors offer an alternative to traditional nuclear technology. Among other benefits, they can be built modularly and transported easily, which reduces the investment risk associated with traditional nuclear power. In addition, these new SMRs would be designed to cycle on and off more frequently and could be used as load-following generation, potentially replacing gas resources for ramping down at sunrise and ramping up at dusk (especially during the low-load Spring and Fall seasons). Although the technology has not yet been deployed at scale, current trajectories indicate it could be a feasible resource in the power sector after 2030, particularly if supported through government policies. The Advanced Dispatchable

Exhibit 11

Dominion Energy Consolidated Energy Mix (GWh) Advanced Dispatchable Technology Scenario



⁴ Rooftop solar is not a focus of this study, but in future studies it could be incorporated into models to assess the impact of distributed generation on load requirements, costs of infrastructure, and land requirements.

Exhibit 8

Consolidated Nameplate Capacity (GW)

Resource Constraints Scenario

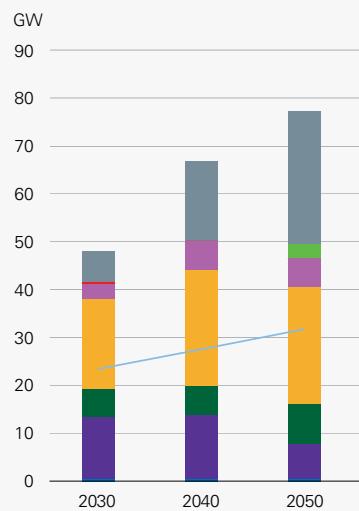
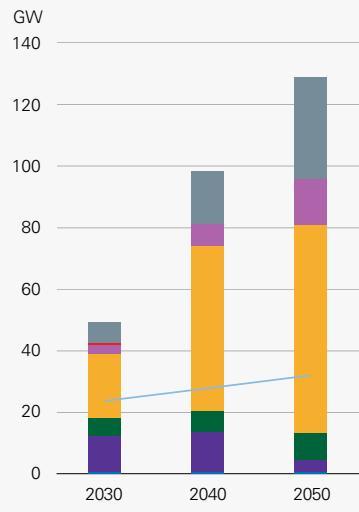


Exhibit 10

Consolidated Nameplate Capacity (GW)

Advanced Dispatchable Technology Scenario



- Hydro
- Natural Gas/RNG
- Nuclear
- Solar
- Offshore and Onshore Wind
- Coal
- Green Hydrogen Peaker
- Energy Storage
- Peak Demand



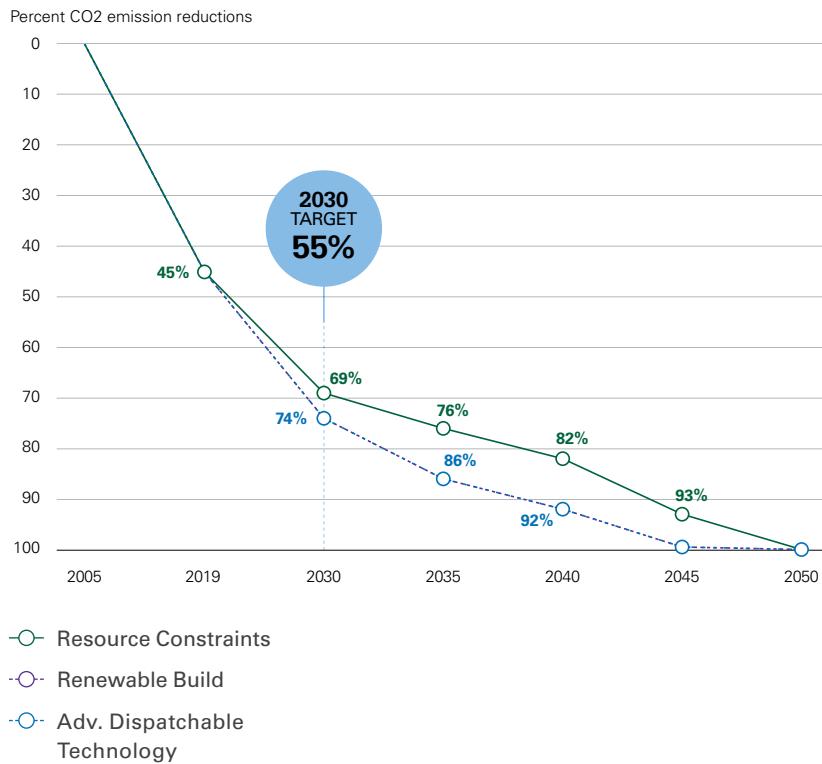
The scenarios evaluated are consistent with the Virginia Clean Economy Act for Dominion Energy Virginia.

Technology Scenario assumes Dominion Energy Virginia includes up to three gigawatts of dispatchable SMR capacity or similar zero-carbon dispatchable resources after 2035.

The three potential pathways previously described result in the following emissions reductions.

Exhibit 12

Carbon Emission Generation Trajectories



The scenarios evaluated are consistent with the Virginia Clean Economy Act (VCEA) for Dominion Energy Virginia. Given the promise of RNG as a potential facilitator of clean, dispatchable generation, the consultant also examined a separate sensitivity in which RNG is allowed to contribute as a clean resource in Virginia, which led to lower costs and increased reliability in all three potential pathways.

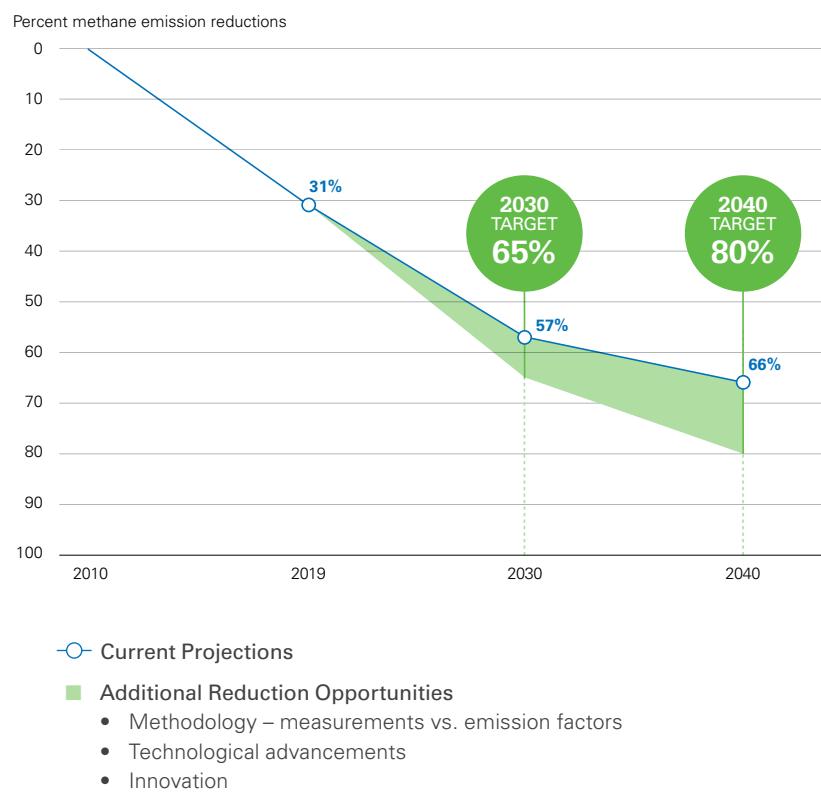
While this analysis reflects overall investment costs for generation resources, it does not consider site-specific operating costs, decommissioning costs, or system upgrade costs necessary to support the addition and retirement of generation resources identified herein. The scenarios described in this report were prepared in conformance with the TCFD, and therefore, unlike the company's Integrated Resource Plans, assume the adoption of broad-based legislative and regulatory regimes that fully support the economy-wide adoption and execution of global decarbonization initiatives — in other words, regimes that do not exist today. For these reasons, these scenarios are distinct from, and do not replace, the company's IRP filings. This report is not intended,

and should not be construed as, a regulatory or legal filing. Per TCFD guidance, consideration of potential costs is relevant to understanding the financial implications of the transition pathways identified in the 1.5 degree scenario analysis. Accordingly, we calculated a net present value of Dominion Energy's potential consolidated capital and fixed and variable operational costs that are reflected in the scenarios (NPV). The estimated NPV is approximately \$80-\$100 billion through 2050, subject to the TCFD/regulatory assumptions described above and various forward-looking assumptions with respect to energy market development and the costs associated with multiple technology options to support a low-carbon future. Additional costs related to the electric transmission and distribution grid transformation required to accommodate the large amount of renewable generation and improve reliability will likely be significant and are not included in the cost analysis.

The carbon from electric generation makes up over 90 percent of the company's direct Scope 1 emissions from operations. Accordingly, much of this report covers the main sources of those emissions. However, the company also evaluated several methane emission-reduction strategies for the natural gas business. The planned emissions reductions include several important measures including (1) replacement of cast-iron, bare-steel, wrought-iron, and ineffectively coated steel mains and services; (2) replacement of intermittent-bleed pneumatic devices with zero-bleed electric or instrument-air devices;

Exhibit 13

Methane Emission Trajectories

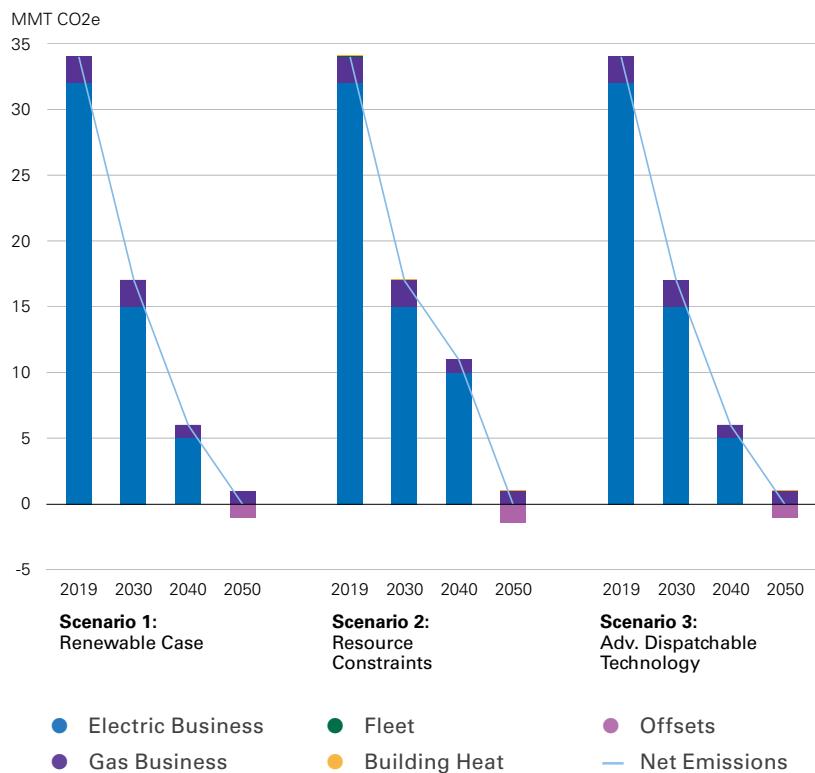


(3) reduced emissions from liquid unloading at production/storage wells; (4) leak detection and repair programs; and (5) reduced venting from maintenance activities. Additional opportunities evaluated include replacement of unprotected steel mains and services, and hydrogen and RNG blending (additional opportunities require regulatory approval). Finally, the current calculation of emissions from customer meter sets is based on a fixed per-meter emission factor. However, meter survey data performed by Dominion Energy for integrity-management programs have shown that most meter sets have no leaks and that emissions result from a small number of meters that could be repaired. The company has pilot programs in place to further evaluate the meter leak detection and repair data in the field. Along with establishing calculations that more accurately reflect true emissions, the company is confident that significant technological advancements in the years to come will support further emissions reductions. [Modernizing Natural Gas Infrastructure](#)

When incorporating the methane-emissions strategies, potential conversion of our vehicle fleet to electric or alternative fuels, and electric generation emission-reduction pathways, the company-wide CO₂e (for carbon and methane) pathways to Net Zero by 2050 from direct Scope 1 emissions from operations form three potential reduction scenarios:

Exhibit 14

Emission Reduction Scenarios



As illustrated in exhibit 14, the company is able to reduce its direct emissions significantly and minimize the use of offsets in its Net Zero strategy.

Scope 3

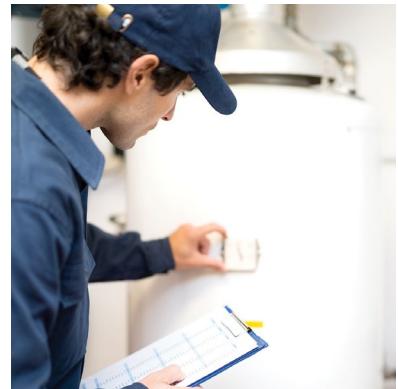
The consultant calculated the Scope 3 emissions set forth in the Metrics and Targets section according to the GHG Protocol, with a focus on upstream and downstream emissions from our local distribution company (LDC) business, purchased power for consumer use, and upstream emissions related to our electric generation. Upstream emissions from capital goods associated with the manufacturing and transportation of solar panels and wind turbines were evaluated based on the best available information from our suppliers and manufacturers in 2019. Some estimates were necessary based on supply-basin averages, consistent with the GHG Protocol. The list of Scope 3 emissions disclosed omits certain immaterial categories of Scope 3 emissions consistent with the TCFD-recommended disclosures. The study focused on the relevant and material value-chain emissions for a typical utility provider.

We continue to refine our inventory of upstream emissions by encouraging suppliers to disclose their own emissions, share their sustainability plans, and provide options for responsibly sourced natural gas. While we are prioritizing the ongoing calculations and disclosure of our upstream and downstream emissions consistent with the GHG Protocol, we are setting our sights higher on driving emissions reductions throughout our value chain. [Metrics and Targets](#)

Customer Focus

More than 7 million customer accounts — individuals, families, small businesses, large corporations, universities, municipalities, state governments, and the federal government — depend on us to deliver the electricity and natural gas they need. Some are high-tech companies that want 100 percent renewable energy. Others are individuals on fixed incomes who care more about cost than the source of their electricity. We have a duty to serve them all.

In order to serve this diverse spectrum of needs, we provide a broad array of options. Those range from renewable-generation portfolios with custom-made rate structures to GreenTherm (which provides customers with an affordable way to combat climate change by supporting carbon-reducing renewable natural gas) to ThermWise, an energy-conservation program in our Western-state operations that provides weatherization, home energy plans, and extensive home retrofits. The company has filed with the Utah Public Service Commission for approval to offer a voluntary carbon-offset program to our customers. We offer a range of energy-efficiency programs, and — pursuant to new standards established by the VCEA — future efficiency programs in Virginia will be designed and implemented with annual goals for energy savings in mind. In South Carolina, total investment in demand-side management (DSM) exceeds \$128 million. Since the program's inception, cumulative energy savings add up to 868 million



Future efficiency programs in Virginia will be designed and implemented with annual goals for energy savings in mind.

50+

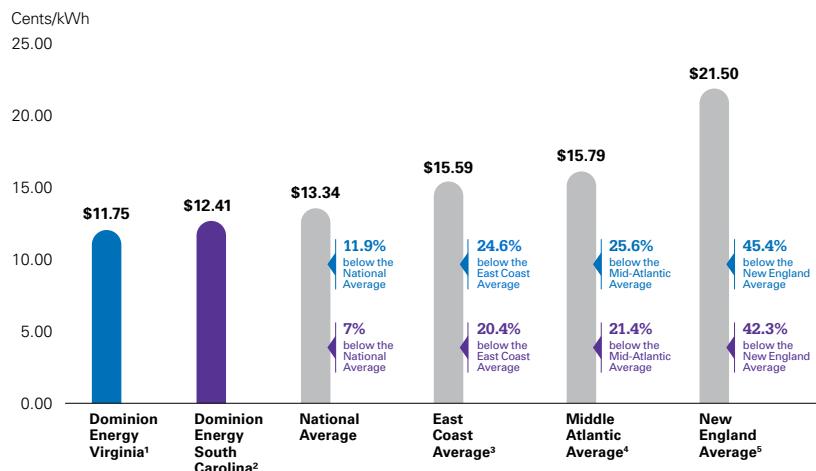
projects were reviewed in 2020 for Environmental Justice considerations.

kilowatt-hours — equivalent to the annual power consumption of more than 70,000 homes.

In all instances, we maintain a steady focus on affordability and value. Electric rates for Dominion Energy Virginia and Dominion Energy South Carolina remain below the averages for the nation, the East Coast, the Middle Atlantic region, and the New England region. We strive continuously to maintain affordability. For instance, we offer a wide variety of efficiency programs to help customers conserve energy and save money, from home energy check-ups to rebates for smart thermostats and Energy Star small appliances. [Energy Efficiency](#)

Exhibit 15

2021 Electric Residential Rates Comparison



¹ Dominion Energy Virginia: residential rates effective April 1, 2021. Source: Company Rates Dept.

² Dominion Energy South Carolina: residential rates effective May 1, 2021. Source: Company Rates Dept.

³ East Coast Average: CT, ME, MA, NH, RI, NJ, NY, PA, DE, DC, FL, GA, MD, NC, SC, VA.

⁴ Middle Atlantic Average: NJ, NY, PA.

⁵ New England Average: CT, ME, MA, NH, RI, VT.

Source: U.S. Energy Information Administration, Table 5.6.A Average Price of Electricity to Ultimate Customers by End-Use Sector; data released April 26, 2021 reflecting February 2021 rates.

Environmental Justice

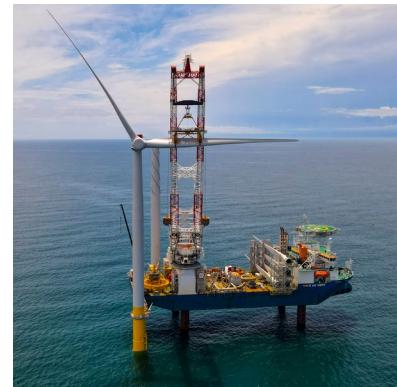
The clean-energy transition requires substantial development of new infrastructure, which has the potential to affect surrounding communities. Dominion Energy is committed to ensuring that those communities have a meaningful voice in our planning and development processes. In cases where historically disadvantaged or marginalized communities are present, our process dictates that we engage directly and intentionally to promote communication and engagement, to ensure that concerns are appropriately addressed, and that we work to mitigate any undue project impacts.

Our aim is to ensure that all communities affected by our infrastructure projects have a voice in their development, and that we avoid disproportionately affecting or benefiting any one group as increasingly we build infrastructure such as underground distribution lines, middle-mile broadband, and other projects where community demand for the infrastructure outstrips short-term availability. We also want all communities to have the chance to benefit from the economic opportunities presented by clean-energy investments. The company has a formal environmental justice (EJ) policy (adopted in 2018), has trained more than 500 employees on EJ, and reviews all major construction projects for EJ concerns. In 2020, that meant more than 50 projects were reviewed for EJ considerations.

Just Transition

The transition to a clean-energy economy will impose costs, and those costs should not be borne disproportionately by any one group, least of all the most vulnerable. The “just transition” is a framework that seeks to provide an equitable transition for workers and communities as we pivot from an extractive, carbon-intensive economy to a more sustainable future. According to the Just Transition Alliance, the principle of just transition is that a healthy economy and a clean environment can and should co-exist. The process for achieving this vision should not cost workers or community residents their health, environment, jobs, or economic assets and should involve those on the front line of infrastructure development in the crafting of policy solutions. In that respect, there are clear parallels to the company’s approach to EJ, discussed above.

Dominion Energy’s core value of ethics impels us to consider questions of equity, and a low-carbon development strategy must take into consideration the needs of our entire workforce. It is important that each colleague has the opportunity, means, and training to obtain energy jobs of the future as we retire some of our generation facilities as part of our clean-energy transition. We offer extensive learning and development resources so that employees can enhance their knowledge, skills, and abilities, or even explore new career paths. Such resources include internal career counseling services as well as self-directed, online learning platforms. Historically, the company provided displaced colleagues who supported retiring fossil-fuel generation consideration for other internal jobs for which they were qualified. We fully intend to continue to treat such displaced employees equitably. In addition, development of our Coastal Virginia Offshore Wind project will create many hundreds of jobs, both direct and indirect. To ensure that the opportunities of the clean-energy transformation are spread as widely as possible, Dominion Energy maintains partnerships with community and technical colleges to train workers in renewable-energy occupations. The company also provides philanthropic support to coal-field communities. Finally, while we are committed to making the energy system as clean as we can, as fast as we can, we recognize the imperative not to sacrifice affordability for the sake of speed. The energy transition cannot be a just one if the cost of energy does not remain affordable.



**Development of our
Coastal Virginia Offshore
Wind project will create
many hundreds of jobs.**



The Board believes effective climate strategy and governance make for prudent risk management.

Governance

Board of Directors

Effective corporate governance is key to achieving our performance goals while maintaining the trust and confidence of our shareholders, employees, customers, and other stakeholders. Our Board of Directors' oversight activities are driven by governance best practices, as well as principles of independence, active engagement, transparency, and accountability. Eleven of the Board's 12 directors are independent, including the Lead Director — an active, empowered role with well-defined duties that is key to providing strong leadership for the Board. This structure encourages fresh perspectives and independent decision-making and promotes management accountability to execute on the company's climate strategy.

Dominion Energy's Board of Directors sets the company's strategic direction and oversees all aspects of its operations, including on Environmental, Social, and Governance (ESG) matters. ESG and sustainability form a cornerstone of our business strategy and are therefore a particular focus area for the Board. While the full Board retains oversight of climate-related risks, opportunities, and strategy, it formed a Sustainability and Corporate Responsibility (SCR) Committee to help it discharge certain ESG oversight responsibilities more effectively. The SCR Committee oversees the company's performance as a sustainable organization and responsible corporate citizen, including its strategies, activities, and policies regarding environmental sustainability, including climate-related matters.

The Board believes effective climate strategy and governance make for prudent risk management. Accordingly, the Board's review of our company's long-term financial plan — which incorporates expenditures for the development of our renewable-generation assets, nuclear relicensing, electric grid and natural gas infrastructure modernization, and environmental compliance — is informed by our climate strategy. This financial plan is updated in a process that dovetails with our annual corporate and business-unit risk assessments, which are part of our enterprise risk management program discussed below. In addition, the Board receives reports throughout the year on sustainability, environmental and climate-related trends, and other matters from members of management, including each of our business segment presidents, our senior risk officer, and our chief environmental officer. The Board believes that one of its fundamental obligations to our investors and other stakeholders is to hold management accountable for executing our climate strategy.

Management

Effective management of the company's strategy and operations starts with the CEO and the senior leadership team, which consists of six senior officers who report to the CEO. Together, they develop and oversee the company's sustainability strategy and initiatives.

In addition, the company maintains three other management units that support climate governance:

- A Climate Council, composed of the CEO, the CEO's leadership team, and operating unit presidents, which develops and oversees sustainability strategy and initiatives and reviews the company's sustainability commitments and performance (meets quarterly);
- A Climate Working Group, composed of senior leadership and subject-matter experts, which manages key initiatives at the direction of the Climate Council (meets monthly); and
- A Net Zero Team, composed of a subset of the Climate Working Group plus business-unit advisers, which supports the Climate Council on achieving climate goals and evaluates policy and technology developments in clean energy.

Political Participation

Dominion Energy's investors, employees, communities, and customers depend on the company's long-term stability. The decisions of local, state, and federal policymakers can affect our company's operations immensely, so we owe it to our stakeholders to stay abreast of political and policy developments that could affect the company's fiscal health, and to exercise the constitutional right to petition government on our own and their behalf. As a matter of policy, the company supports the objectives of the Paris Agreement. In December 2020, Dominion Energy joined a coalition of leading U.S. corporations urging then President-elect Joe Biden and the new Congress to enact ambitious, durable climate solutions. "We are committed to meeting the profound challenge of climate change," the statement declared. "Our companies view climate action as a business imperative." The company also operates a political action committee. Participation is strictly voluntary and nonpartisan. Membership is open to eligible employees, the Board of Directors, and shareholders.

Transparency

We strive to conduct our business transparently, to build public trust, and to form lasting and mutually beneficial relationships by engaging with public officials, regulators, community and business leaders, and environmental and safety agencies and advocates. In addition, we align our lobbying activities and trade-association participation with our core business and our bedrock principles of environmental sustainability, energy reliability, customer affordability, and shareholder value. Our investments in renewable energy, nuclear relicensing, and energy efficiency are disclosed annually in our Sustainability and Corporate Responsibility Report as well as in numerous other publicly available reports. We regularly assess the positions taken by all national trade associations in which we participate to ensure their alignment with our core values. In cases of misalignment, the company constructively engages other association members to work through differences. This approach also applies to coalitions within organizations with like-minded members. In rare



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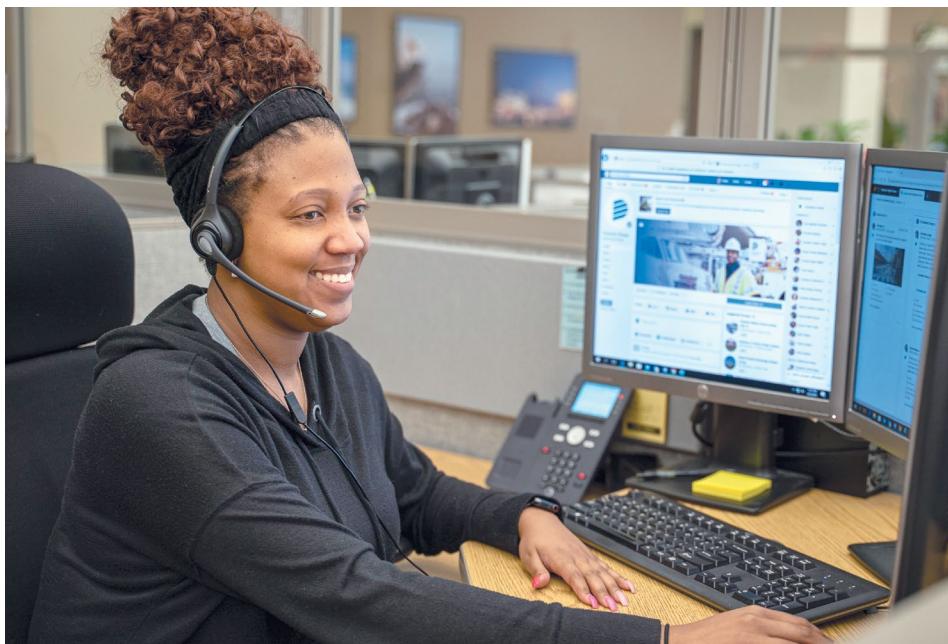
cases, the misalignment between an association's official position and our company's values and business interests may be substantial enough to require our company to sever ties with the organization.

Engagement

For Dominion Energy, engagement means being transparent about our actions and listening to what others think. We value both communication and collaboration. We consistently seek out other perspectives to inform our own, through dialogue with our customers, investors, and other stakeholders, and invite them to share their input. Our engagement with investors is robust and ongoing. We pay attention to a wide array of perspectives from thought leaders, community groups, advocacy organizations, public-opinion surveys, and customer feedback. Annually, we meet with hundreds of organizations, and routinely retain industry experts to conduct surveys, host community meetings, and conduct stakeholder workshops.

In 2020, we conducted a Priority Sustainability Issue (PSI) assessment in partnership with the Electric Power Research Institute (EPRI). The PSI assessment process involved detailed research and multiple rounds of direct engagement with a broad selection of both internal and external stakeholders and included climate change among the issues considered.

Most recently, Dominion Energy has created a unified customer experience group to provide a more holistic and differentiated experience that better serves customers and unites the business behind a common vision of achieving an effortless, consistent, and customer-centered experience.



Risk Management

Overview

Dominion Energy's Board of Directors oversees our long-term strategy and the various risks the company faces, including climate-related risk. The Board believes that the company's interests are advanced by responsibly addressing these risks, whether they are operational, financial, regulatory, or strategic.

Dominion Energy has embedded robust enterprise risk management processes throughout the organization to help identify, assess, and manage risk. Management seeks to mitigate and report risks pursuant to our risk-management policies. The Board and its committees regularly receive and discuss reports from members of management, including the senior risk officer and others involved in risk assessment and risk management.

We identify and assess, at least annually, major risks associated with each of our key business units. Risk assessments also are conducted at a corporate level for Dominion Energy, Inc. These assessments include a wide range of educated assumptions about what the future will look like, especially regarding external factors outside our control. The company's approach has always been to employ the Precautionary Principle — which is to minimize known risks and mitigate risks that are not yet fully understood, but for which there are indications of possible future events or outcomes.

The risks posed by climate change are among the most significant that Dominion Energy faces because of their scope, severity, and duration. The repercussions of global warming and efforts to address it can alter everything from the global economy and the competitive and regulatory environments to Dominion Energy's infrastructure and operations.

Transition Risks

Transition risks are those entailed by the power generation shift from fossil fuels to zero-carbon energy sources. Our key transition risks are policy and execution risks. Additional transition risks are set forth in the following chart.

They include:



We identify and assess, at least annually, major risks associated with each of our key business units.

Policy, Legislation, and Permitting

Potential Risk	Risk Impact	Risk Management and/or Mitigation
Emissions Legislation <ul style="list-style-type: none"> Poorly designed emissions pricing schemes; Patchwork of state-specific emission legislation in absence of a unified federal policy; Lack of economy-wide carbon pricing mechanism. 	<ul style="list-style-type: none"> Increased cost of doing business, affecting customer prices and company performance; More carbon-intensive generation in neighboring states without carbon taxation; Company placed at a competitive disadvantage in relation to other energy companies or business sectors by individual approach to net zero emissions that other companies may not pursue. 	<ul style="list-style-type: none"> Working constructively with the Biden Administration and with Congress as they seek to address the climate challenge; Supporting the development and implementation of an economy-wide federal program to reduce greenhouse gas emissions consistent with our Net Zero goals.
Statutory Obligations <ul style="list-style-type: none"> Mandates that could constrain the company's strategic flexibility in the face of changing market conditions, such as natural gas bans; Legislation including renewable portfolio standards and ambitious procurement targets for renewable resources. 	<ul style="list-style-type: none"> Higher rates and reduced reliability; Stranded assets or loss of revenue due to banned new natural gas connections; Mandatory electrification resulting in greater carbon emissions than using natural gas due to inadequate transitioning of local electric grid to less carbon-intensive energy sources. 	<ul style="list-style-type: none"> Playing an active role in the political process to ensure that policymakers take into account the interests of our customers, investors, communities, and other stakeholders; Maintaining commitment to affordability; Supporting legislation in our service territory that preserves consumer access to natural gas service in homes and businesses.
Changes in Market Design <ul style="list-style-type: none"> FERC market reforms or changes in pricing rules in regional transmission organization markets. 	<ul style="list-style-type: none"> Necessitated changes in approach to climate strategy and business plans. 	<ul style="list-style-type: none"> Participating in regulatory proceedings, as appropriate, and in the RTO market stakeholder process.
Land Use Restrictions <ul style="list-style-type: none"> Increased local opposition to solar projects; Permitting challenges and land availability. 	<ul style="list-style-type: none"> Inability to find suitable land for solar generation; Rejected or canceled solar development plans, as has occurred in multiple localities. 	<ul style="list-style-type: none"> Including a potential pathway where the land necessary for the Renewable Build scenario was limited as part of our scenario analysis.
Decommissioning <ul style="list-style-type: none"> Finite lifespan of renewable infrastructure such as solar panels and wind turbine components; Lack of adequate policy support for reuse or recycling. 	<ul style="list-style-type: none"> Impeded adoption of renewable energy; Raised cost to companies and consumers; Decommissioning issues that lead to sub-optimal environmental outcomes. 	<ul style="list-style-type: none"> Supporting policies for recycling and re-use of renewable energy components.

Technological

Potential Risk	Risk Impact	Risk Management and/or Mitigation
Distributed Energy Resources <ul style="list-style-type: none"> Widespread use of Distributed Energy Resources (DERs) such as rooftop solar. 	<ul style="list-style-type: none"> Reduced revenue and demand, burdening other customers with higher rates; Increased network complexity, unanticipated power flows resulting in system imbalances, impaired control, and lessened reliability; Impaired long-term demand forecasting and infrastructure planning. 	<ul style="list-style-type: none"> Investing in microgrid technology that will obtain real-world data, better understand DER performance characteristics, perform testing of DER grid support and islanding capabilities, vet new technology integration into the distribution grid, and evaluate microgrid operations architecture for potential future applications.

Potential Risk	Risk Impact	Risk Management and/or Mitigation
<p>Technological Stagnation</p> <ul style="list-style-type: none"> • Slower-than-expected advances in energy technology; • Lack of carbon-free, on-demand power sources; • Lack of progress on carbon capture and storage; • Proliferation of non-dispatchable generation. 	<ul style="list-style-type: none"> • Inability to achieve emission reduction goals; • Reduced grid reliability; • Increased cost for natural-gas fired generation; • Difficulty load-balancing in absence of more advanced grid technology and demand management tools. 	<ul style="list-style-type: none"> • Exploring the value of green hydrogen as a long-term storage solution; • Anticipating technological innovations as extrapolations from existing applied science.

Market

Potential Risk	Risk Impact	Risk Management and/or Mitigation
<p>Changing Market Dynamics</p> <ul style="list-style-type: none"> • Escalating costs in key low- and zero-carbon business areas (for example, rising development, construction, and operational costs for nuclear facilities, and cost pressures for rare earth minerals). 	<ul style="list-style-type: none"> • Reduced revenue available for new and existing zero-emission generation; • Adverse financial impact; • Closure of nuclear facilities rather than relicensing. 	<ul style="list-style-type: none"> • Extending licenses of existing nuclear power stations (Surry and North Anna); • Exploring potential new technologies and resources, including SMRs; • Signing 10-year contract with Connecticut utilities for half of Millstone's power output.
<p>Economic Disruption</p> <ul style="list-style-type: none"> • Pandemics, natural disasters, geopolitical instability; • The shift to a low- or no-carbon economy, change on a massive scale; • Mass migration to clean energy jobs. 	<ul style="list-style-type: none"> • Interference with business plans or altered energy transition; • Unpredictable business stability and growth; • Disruption to labor markets intensifying competition for workers and driving up project costs. 	<ul style="list-style-type: none"> • Diversifying supply chain providers; • Scenario modeling analysis to ensure clean-energy transition; • Engagement with community colleges providing skilled workforce in renewable energy jobs.
<p>Changing Stakeholder Preferences</p> <ul style="list-style-type: none"> • Shift in public attitudes toward natural gas; • Widespread adoption of distributed energy resources. 	<ul style="list-style-type: none"> • Sharp increases in customer self-generation leading to loss of revenue; • Reduced demand for natural gas distribution. 	<ul style="list-style-type: none"> • Providing customers with more energy options such as BrightSuite (a home automation, security, and energy efficiency program) and GreenTherm.

Reputational

Potential Risk	Risk Impact	Risk Management and/or Mitigation
<p>Damage to Company Reputation</p>	<ul style="list-style-type: none"> • Failure of the company to continue its momentum could cause it to be viewed as indifferent to environmental health or public welfare; • Improvident adoption of intermittent energy sources without regard for system reliability could be seen as sacrificing customer welfare for the sake of a "green" image. 	<ul style="list-style-type: none"> • Moving forward with clean energy transition as rapidly as safety, affordability, and reliability considerations permit.



We believe the climate-related laws and regulations addressing this issue must be durable — ideally passed by Congress and signed by the President.

Policy, Legislation, and Permitting

Emissions Legislation

We believe the regulations and laws addressing climate change must be durable — ideally passed by Congress and signed by the President. Dominion Energy supports the development and implementation of an economy-wide federal program to reduce greenhouse gas emissions consistent with our Net Zero goals.

Statutory Obligations

We believe natural gas plays a critical role in the clean-energy transition while renewable energy sources are increasingly built and implemented and while required technologies, such as utility-scale and long-duration battery storage and dispatchable carbon-free generation, evolve. In the areas in which we operate, and in particular where we operate local natural gas distribution companies, we have found continued state and regulatory support for natural gas as a utility fuel that balances cost to customers, offers a cleaner footprint versus other heating fuels, and provides reliable and safe operations. Although we recognize gas bans are a risk in certain areas of the country, we are working collaboratively with legislators in our jurisdictions to preserve natural gas as an energy option for our customers. According to a July 2020 survey, Dominion Energy's natural gas utility customers in Utah, Ohio, and South Carolina strongly oppose such bans: 74 percent oppose policies banning new natural gas connections or requiring customers to convert to all-electric appliances, and more than 60 percent of those who identify as environmentalists oppose such policies. We find that customers tend to prefer being able to choose natural gas if they wish, and we are working with state lawmakers to preserve customers' ability to use natural gas.

Failure to implement federal mechanisms that promote the clean-energy transition and foster innovative clean-energy technologies may challenge execution of a coordinated climate strategy. State or federal policies could further limit GHG emissions or require greater efficiency, imposing additional costs on the company that would, like all costs, require approval from state commissions. Complying with the VCEA, as well as other climate-related legislation in other states, requires investments in clean energy that are subject to approval by state regulatory commissions and that may be denied or materially altered.

Land Use Restrictions

The risk associated with land-use and permitting issues presents a significant potential barrier to power generation development.

Land-disturbance permitting is a time-intensive process, which can overwhelm county permitting agencies that are not equipped to manage thousand-acre parcel development permitting in a short period. The duration of permit review cycles has increased dramatically (i.e., by months) on East Coast utility-scale solar projects, and this has put pressure on meeting schedule requirements. Completing projects on time is crucial to meeting regulated and unregulated project-governance requirements.

In addition, county officials sometimes place additional obligations on projects. These obligations can reduce land availability (e.g., additional wildlife corridors or setbacks); add cost to the projects, affecting

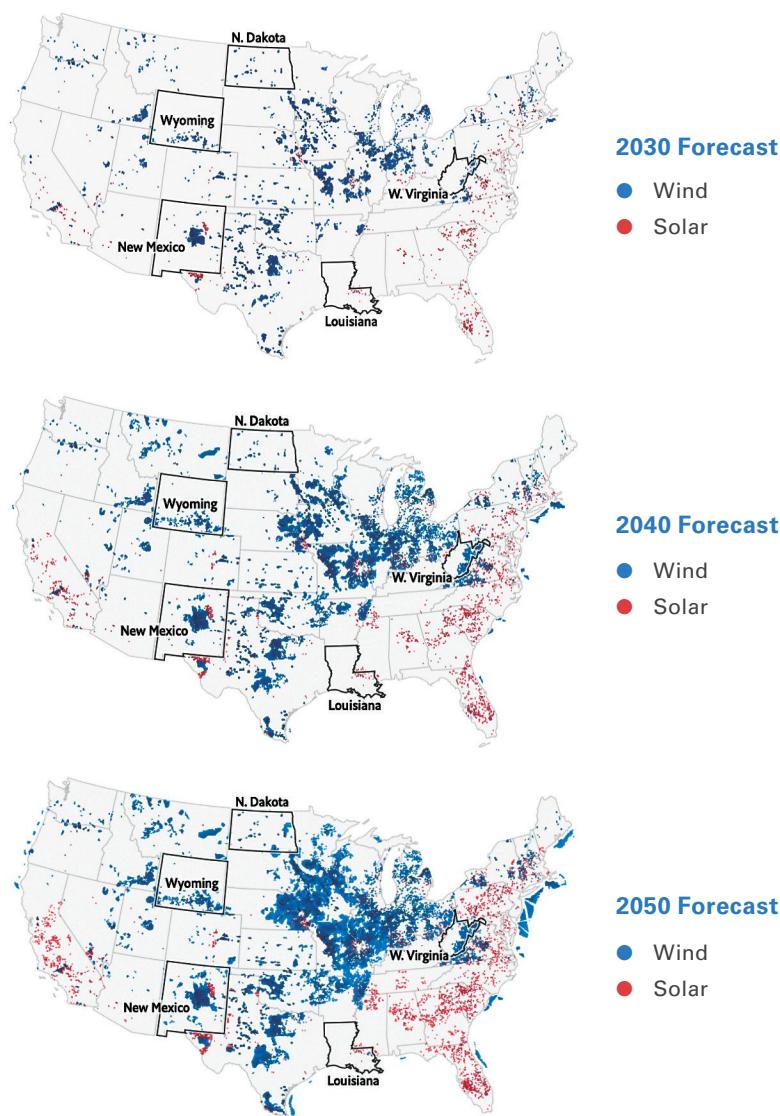
economics (e.g., landscape screening to reduce visibility or limitations on weekend work); or lengthen the time needed to implement the project (e.g., delays for permitting reviews, hold points for county inspections).

The company seeks early engagement with county officials to share the company's view of best practices regarding land use planning and permitting. However, such mitigation efforts yield mixed results given the diversity of views regarding solar development.

The graphic below, from *The Economist*, illustrates the changing land-use patterns over the next three decades to accommodate the clean-energy transition. Onshore wind and solar require vast amounts of land, which requires permits from state and/or federal agencies. Permitting and other project-execution challenges may hinder the company's ability to meet the requirements of the VCEA.

Projected Renewable-energy sites in the contiguous United States

Source Princeton University and reprinted by special arrangement with *The Economist*.



Physical and Climatic Risks

Acute

Potential Risk	Risk Impact	Risk Management and/or Mitigation
Severe Weather <ul style="list-style-type: none"> More frequent and powerful storms 	<ul style="list-style-type: none"> Damaged infrastructure and equipment; Degraded transportation infrastructure, interrupting normal business operations and impeding service restoration. 	<ul style="list-style-type: none"> Undergrounding vulnerable electric distribution tap lines; New construction standards to build a stronger overhead grid and improve resiliency; Facilities designed to withstand severe weather and other natural events; Continuous monitoring and assessing physical risks associated with severe weather and adjusting planning to reflect results of that assessment; Incorporating weather variability into generation planning process to assess financial effects of these risks.
Drought <ul style="list-style-type: none"> Low water levels Higher water temperatures 	<ul style="list-style-type: none"> Interference with the use of nearby water bodies as a resource for cooling our nuclear reactors potentially leading to power outages; Impeded economic activity such as shipping, potentially affecting demand for Dominion Energy's service; Disruptions to extractive industries such as hydraulic fracturing, which supplies natural gas that we supply to customers of our local distribution companies. 	<ul style="list-style-type: none"> Switching a facility from a municipal or surface water supply to a reservoir, or a switching a power station to a less water-intensive fuel; Monitoring water quality and implementing operational and structural best management practices such as changing the liner of the pond from black to white to deflect solar radiation; Routinely improving facility drought/flood, storm preparation, and recovery plans based on experience during drills.

Chronic

Potential Risk	Risk Impact	Risk Management and/or Mitigation
Flooding and Sea Level-Rise <ul style="list-style-type: none"> High water on land and sea, storm surges, sunny-day flooding. Intrusion inland of brackish water. 	<ul style="list-style-type: none"> Inundated coastal facilities requiring the elevation of pad-mounted electric transformers and other equipment or structures; Disruptions to offshore wind turbines or the operations at the natural gas export terminal at Cove Point, Maryland; Degraded groundwater quality, affecting underground utility lines, corroding pipes, and shifting economic activity; Damaged roads and other transportation infrastructure. 	<ul style="list-style-type: none"> Diversification of fuels and chemical supplies and a diverse power generation fleet mitigates risk of supply chain disruptions due to flooding; Topping off supplies at Power Stations or other facilities whenever weather events are imminent.
Rising Temperatures and Heat Waves <ul style="list-style-type: none"> Substantial temperature increase 	<ul style="list-style-type: none"> Greater demand for electricity for home cooling (or lower demand during cold months); equipment failure; stress on cooling systems and the potential to impact the aquatic systems receiving cooling water; loss of electric transmission efficiency; potential temporary shutdown of facilities such as nuclear power stations; Stressed electric generation capacity leading to blackouts (a situation that arose in California in August 2020) or requiring investment in additional capacity, with potential implications for customer prices. 	<ul style="list-style-type: none"> Diversifying our generation portfolio, hardening our system for extreme weather and expanding our generation supply to accommodate peak demand.

Potential Risk	Risk Impact	Risk Management and/or Mitigation
Human, Animal, and Plant Migration <ul style="list-style-type: none"> • Shifting settlement and development patterns. • Population migration from high-risk areas to others. • Reordered distribution of animal and plant species. 	<ul style="list-style-type: none"> • Changes in regional customer demand; • Major changes in population distribution affecting locations of power generation facilities and configuration of electric transmission and distribution networks; • Protected species migrating into an area where infrastructure had been planned, or extension of protected status to a species already present, either of which might affect government permitting decisions. 	<ul style="list-style-type: none"> • Evaluating the impacts of our generating stations on local wildlife and habitat, including consideration of threatened and endangered species; • Routinely conducting biological studies at many of our power stations to assess the fisheries and habitat around the facilities.

Financial Risks

Access to Capital

Policies such as the European Union's Sustainable Finance Disclosure Regulation (SFDR) impose mandatory ESG disclosure obligations for asset managers and other financial-market participants. These policies have the potential to re-allocate capital away from our business model. Economic stress that impairs global capital markets could raise the cost of capital (including equity and debt capital) for utility investments and operations, affecting the affordability of services for our customers or the strength of our operating results. Governmental policy changes, such as a future expiration of the production tax credits for renewable energy, could affect the financing of renewable-energy projects. The rapid expansion of renewable energy throughout the country could increase competition for financing of individual projects, either delaying or raising the cost of their completion. Dominion Energy's access to capital depends on constructive regulatory outcomes, our climate strategy, the mitigation of climate risk, and company performance.

Catastrophic Loss

The tendency of climate change to exacerbate severe weather increases the likelihood of devastation from extreme temperatures and powerful storms. Potential consequences include downed power lines; flooded buildings; pipeline ruptures from frost heave, landslides, heavy rain, or thermal stress; property damage and other economic loss from hurricanes; structural damage due to erosion; loss of generation resources and fuel supplies; and more. Not all of these losses will be insured.



Achieving net zero emissions requires a massive shift of generation from carbon-based energy sources to low- and no-carbon sources.

Transition Opportunities

Resource Efficiency

Dominion Energy has recognized the symbiosis that exists between financial and environmental sustainability: Waste, as a famous business leader once said, is just a resource out of place. Our company works hard to make our operations as efficient as possible. We have done this by retiring older, less-efficient generation units, which reduces fuel use, emissions, and cost; by seeking license extension for our carbon-free nuclear units; by pursuing efficiencies through programs such as Buy Smart and Envision Tomorrow; and through a rigorous waste-reduction program (for example, in 2019, we reused or recycled 46 tons of information technology equipment).

We have worked extensively to reduce our water consumption — e.g., by switching to air-cooled condensers and other water-sparing equipment at power stations. One water conservation project at our Warren County, Virginia, power station is expected to save more than 2.6 million gallons of water a year. As a member of the Electric Utility Industry Sustainable Supply Chain Alliance, we reuse or recycle other material as well. In recent years we have recycled more than 41 million pounds of metal and wood and saved more than 3,200 trees by recycling shredded paper.

Energy Source

Renewable Generation Investments

Achieving Net Zero emissions requires a massive shift of generation from carbon-based energy sources to low- and no-carbon sources. To that end, Dominion Energy Virginia's 2020 Integrated Resource Plan reflected a quadrupling of renewable energy and energy storage compared to the prior year's iteration. Through 2035, the company expects to expand offshore wind, solar, and energy storage by roughly 24,000 megawatts. This will entail substantial investment. Through 2035, we anticipate capital investments in offshore wind of up to \$17 billion to meet Virginia's mandate for up to 5,200 megawatts of offshore wind, in solar and/or onshore wind of up to \$20 billion, and in renewable natural gas of up to \$2 billion.

Grid Transformation

The passage of the VCEA provides a clear path to the commonwealth's energy future — transitioning to 100 percent carbon-free electricity by 2045. This path includes over 15,000 megawatts of new solar and onshore wind, up to 5,200 megawatts of offshore wind, and 2,700 megawatts of storage — along with significant expansion of residential solar (or "net metering") and energy-efficiency targets. To deliver on this transition to a generation fleet made of 100 percent carbon-free resources, the transmission and distribution grids will need to evolve as well.

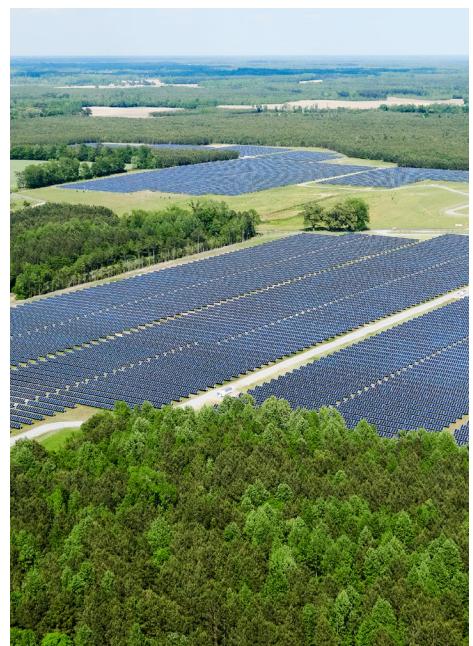
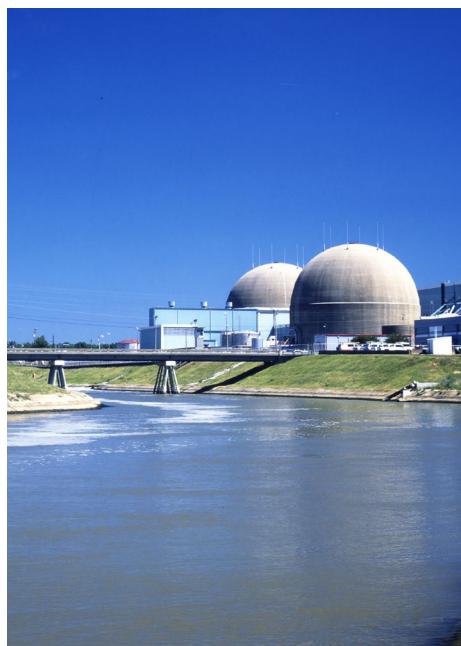
The current distribution grid was not designed to accommodate the bi-directional flows of power resulting from the significant increase in distributed energy resources (DERs). Dominion Energy's Grid

Transformation Plan (GTP) represents a comprehensive strategy to meet these new challenges. It proposes critical distribution infrastructure investments to ensure we safely deliver on the promise of the VCEA, providing improved availability, resiliency, and security for our customers. With GTP investments in the distribution system, DERs — including storage resources — can (1) act as a system resource that helps maximize other available resources, (2) have a role as future generating assets or preclude the need for grid upgrades, and (3) maintain reliable service to customers.

It is critical to note that the need for grid transformation is not limited to the company's distribution infrastructure. The bi-directional power flows within lower-voltage distribution systems are driving reverse flows of energy from the distribution system back onto the higher-voltage bulk electric grid. In combination with the significant increase in transmission-connected utility-scale renewables, this requires expanding transmission capacity and capability. In addition to conventional transmission substation and wire upgrades and installations, the company is working to identify and develop solutions to enhance the bulk electric grid. Solutions include a class of technologies referred to as Flexible AC Transmission Systems (FACTS).

Expansion of Carbon-Free, On-Demand Power (CFOP) Sources

Achieving Net Zero emissions will require the implementation of several strategies working in tandem. As noted above, the company will need to invest heavily in zero-carbon renewable energy sources. We have submitted applications to extend the licenses of our Surry and North Anna Power Stations for an additional 20 years. In May 2021, the Nuclear Regulatory Commission approved our application for Surry. We are evaluating license extensions for our other nuclear stations as





More than

90%

of Connecticut's carbon-free electricity is provided by our Millstone Nuclear Station.

well. Together, these stations provide more than two-fifths of our total electricity generation. (Our Millstone nuclear station provides nearly half of Connecticut's electricity and more than 90 percent of the state's carbon-free electricity.)

While these developments will take us substantially closer to our goal of Net Zero emissions, the intermittency of renewable generation, combined with our customers' need for reliable service they can count on around the clock, will require the deployment of commercially feasible, quick-start generation resources that can step in to meet load demands when the weather does not cooperate. Dominion Energy is exploring the potential for several of these carbon-free, on-demand power sources — including hydrogen, modular nuclear designs, carbon capture, and other emerging solutions. The company also supports efforts to research and develop low-carbon technologies through collaborations such as the Low-Carbon Resource Initiative — a five-year, international project jointly led by the Electric Power Research Institute and the Gas Technology Institute, and sponsored by major players in the energy industry, including Dominion Energy.

Next-Generation Nuclear

Nuclear power currently supplies almost 20 percent of the electricity in the United States, and 55 percent of carbon-free electricity. As demand for electricity grows, so will the need for nuclear generation. However, challenges related to capital investment, insurance, permitting, and escalating design and construction costs have made large-scale, central-station nuclear plants difficult to develop. At present only two reactors in the United States are under construction.

The fixed costs associated with today's large commercial nuclear reactors make them more suitable to steady baseload generation than to variable output. SMRs, on the other hand, hold the potential to serve as load-following resources. Their smaller size, modular components, and passive safety features make it possible to site them on brownfields such as retired fossil-fuel plants or current nuclear sites, or to use them as power sources for microgrids. They also could be used for cogeneration, producing both hydrogen and carbon-free heat for industrial processes, and they are one of the only carbon-free generation options that can provide voltage support while easily integrating into the existing transmission system. The Nuclear Regulatory Commission has issued a final safety evaluation for an SMR design by NuScale Power and could approve full design certification in the latter half of 2021.

Another potential opportunity lies in next-generation nuclear designs (Generation IV under the Department of Energy's taxonomy). Those include very-high-temperature reactors, which not only produce electricity but also can be used for hydrogen production through high-temperature electrolysis; international reactor innovative and secure (IRIS) systems; and fast-spectrum reactors. The new generation of reactors incorporates a variety of benefits, from enhanced safety to lower waste production.

Gas With Carbon Capture, Utilization, and Storage (CCUS)

With only a few installed examples in the power generation sector, CCUS is too expensive for widespread adoption at present. Three factors are likely to change that over time. First, innovation should lower the cost of the technology, as it has done with solar panels, computer processing, and numerous other examples. Second, the uses for captured carbon dioxide are likely to expand, providing a commercial incentive for consumption rather than sequestration. Some estimates place the market for captured carbon at \$800 billion to \$1.2 trillion per year. Third, if more policymakers impose a price on carbon emissions, either through a direct tax or through a cap-and-trade system like that used by the Regional Greenhouse Gas Initiative (to which Dominion Energy is a party), the value of CCUS will increase even further.

Energy Storage

The variability of renewable generation creates a need for long-term storage (measured in days, weeks, or potentially seasonally), both to fill in the gaps when demand exceeds supply, and to optimize the use of wind and solar generation when supply exceeds demand so curtailment is avoided.

Current battery technology is limited to short-term storage, measured in hours. As the energy transition proceeds, utilities will need long-term energy storage to ensure reliable, around-the-clock service in all seasons and conditions. Dominion Energy Virginia has received regulatory approval for four battery-storage pilot projects. These will pave the way for the additional energy storage technology needed to support the company's commitment to achieve Net Zero carbon and methane emissions by 2050, increase our renewable generation, and improve grid reliability.





The company has moved forward with the first phase of its electric school bus program in Virginia, through which 50 buses are being distributed to 16 localities throughout the commonwealth.

Dominion Energy operates the world's largest energy storage facility: a 3,003-megawatt pumped-hydro power station in Bath County, Va. When electricity demand is low, the company pumps water from the lower of two reservoirs to the upper one. When demand spikes, valves open to let water run back to the lower reservoir at a rate of 13.5 million gallons per minute. The downward flow of water generates enough electricity to power 750,000 homes and provides reliable backup energy if other sources go offline.

We also operate a second pumped-hydro energy storage facility in Jenkinsville, South Carolina, that has a capacity of 576 megawatts. Finally, we continue to evaluate an additional pumped-storage facility in Southwest Virginia.

[**Hydrogen**](#) can also serve an important role in long-term energy storage.

A number of alternative storage mechanisms are in various stages of development. Examples include compressed air energy storage; thermal storage such as molten salt or molten silicon; cryogenic storage; flywheels; and gravity-based systems that use underground hydro, suspended mass, or sand.

V2G

Vehicle-to-grid (V2G) technology provides another opportunity for the company to expand its business and provide innovative solutions to our customers. The company has moved forward with the first phase of its electric school bus program in Virginia, through which 50 buses are going to 16 localities throughout the commonwealth. When not in use, the buses can serve as backup batteries, providing stability to the grid. They also can be deployed as mobile power stations during emergencies. Lessons learned from the school bus program could serve as a foundation for broader V2G initiatives in the future.

Modernizing Natural Gas Infrastructure

Dominion Energy has been able to cut methane emissions substantially through a variety of programs, including infrastructure replacement. The company is replacing equipment such as bare-steel and cast-iron pipe, valves, and fittings with new, lower-emissions equipment. For example, in 2019, Dominion Energy Ohio and Dominion Energy West Virginia replaced over 195 miles of bare-steel and cast-iron pipes. Dominion Energy West Virginia has received approval to accelerate its pipeline replacement program over the next 25 years, reducing methane emissions while replacing more than 1,500 miles of pipeline. In addition, Dominion Energy Wexpro is replacing intermittent-bleed devices with zero-bleed electric or instrument-air devices. [**Methane Emission Reductions Strategies**](#)

Renewable Natural Gas (RNG)

Dominion Energy has created two of the largest RNG programs in the country by partnering first with Smithfield Foods to create Align RNG, and then with Vanguard Renewables and the Dairy Farmers of America. These programs capture methane created through farming operations and convert it into renewable natural gas that can be used interchangeably with conventional natural gas. Because methane is a substantially more potent greenhouse gas than carbon dioxide, the RNG process removes more greenhouse-gas potential from the atmosphere than is created

at the customer's burner tip. In late 2019, we finalized construction of our first Align RNG project in Milford, Utah. The project entered commercial service in the spring of 2020. Additional projects are under development in North Carolina and Virginia, with more planned for Arizona and California. Additionally, Dominion Energy's GreenTherm program provides customers with an affordable way to reduce methane emissions and combat climate change by allowing customers in Utah to voluntarily purchase RNG green attributes. A similar GreenTherm program was filed in North Carolina.

Dominion Energy has created two of the largest RNG programs in the country by partnering first with Smithfield Foods to create Align RNG, and then with Vanguard Renewables and the Dairy Farmers of America, to capture methane created through farming operations and converting it into renewable natural gas that can be used interchangeably with conventional natural gas.



Hydrogen

Green hydrogen holds great potential to provide a single source of carbon-free energy to the residential, commercial, industrial, and transportation sectors. It can serve as both a medium for energy storage and a fuel source for electricity generation. Green hydrogen development via electrolysis utilizes carbon-free electricity from sources such as solar, wind, and nuclear generation. Development of green hydrogen is well-suited for energy systems with large amounts of renewable generation that can offer excess power.

Green hydrogen could then be used in fuel cells in electric vehicles, in conjunction with or in place of natural gas in power plants, or as a fuel for home cooking and heating or certain industrial processes.

One substantial advantage of hydrogen is that it can be blended into the existing natural gas network, preserving the beneficial use of natural gas infrastructure. Another advantage is that hydrogen, like natural gas, is a preferred and more efficient heating source than electric heat pumps in colder climates.

Products, Services, and Markets

Electrification

Efforts to address climate change argue in favor of electrifying transportation, which ranks first among the sources of greenhouse gas emissions in the United States. As more consumers embrace electric vehicles (EVs), demand for electricity will rise. Similarly, widespread adoption of EVs will require extensive charging infrastructure, which Dominion Energy is well positioned to develop.

To accelerate the adoption of EVs, in 2020 the company announced a new program in Virginia providing rebates for charging stations for



multi-family communities, workplaces, transit bus depots, and fast-charging stations, with rideshare fast charging and residential rebate program to follow in 2021. The company is also planning to submit an application to the State Corporation Commission to expand customer access to charging infrastructure across the service territory in 2021. This application will focus on fleet electrification and residential/public charging solutions. In early 2021, Dominion Energy and five other utilities in the Southeast and Midwest formed the Electric Highway Coalition and announced plans to develop a network of EV charging stations along major travel routes from the Atlantic Coast, through the Midwest and South, and into the Gulf and Central Plains regions. In 2021 the company initiated separate pilots to evaluate vehicle charging patterns in a variety of settings. Specifically, we entered into an agreement for an urban mixed-use setting in an area with new multi-family homes, office space, and a variety of commercial businesses. We are further initiating pilots in both Virginia and South Carolina at a variety of airports at existing longer-term parking areas. In both pilots we are using level II charging from multiple equipment providers with the company owning the chargers while retaining rights to all data and any associated environmental offset values.

Shipping offers another area in which electric utilities can facilitate the clean-energy transition. Rather than use heavily polluting bunker fuel while in port, docked vessels could tap into the mainland grid for their power needs. Electrification of cargo-handling equipment and port transportation also offers an opportunity to reduce carbon emissions associated with port activities. Virginia and the Carolinas have an extensive system of commercial and military ports, which could create a new source of demand for power companies.

By providing electricity derived from renewable or carbon-free, on-demand power sources, Dominion Energy can go beyond its own Net Zero goals to help reduce emissions from other economic sectors and to help ensure universal availability of the needed charging infrastructure.

Microgrids

Microgrids can serve as useful laboratories to analyze the interplay between DERs and the broader grid. In severe weather, they can offer additional resilience to islanded customers by using their own DERs to meet demand for critical services such as first-responder agencies, medical care, and emergency communications. Microgrids also open up the possibility of new ways to serve customers. For example, utilities could provide heterogenous, high-quality, high-reliability microgrid services to customers (e.g., server farms) that need continuity of power with minimal voltage variation and low harmonic content.

Dominion Energy has set up microgrid projects in its business servicing military bases both within and outside of its regulated service territory. The company also is conducting a microgrid demonstration at its Locks campus near Petersburg, Virginia, that will provide the research and operational experience needed to prove the viability of advanced grid support capabilities, non-wire energy alternatives, resiliency benefits, and other DER functions on the company's distribution grid.



Shipping offers another area in which electric utilities can facilitate the clean-energy transition.



Dominion Energy offers an extensive menu of efficiency programs for both residential and commercial customers.

Smart Grids

The increasing penetration of non-dispatchable renewable energy resources, including those at the distribution level, will make management of the electric system vastly more complex. Managing that complexity will require investment in advanced technology that will allow greater visibility into the system, as well as other tools to manage customer demand. Managed properly, however, DERs can serve as a system resource that can maximize the value of other available resources, and potentially offset the need for future traditional generating resources.

A robust and well-planned transmission grid is necessary to properly deploy generation from DERs. As generation becomes more decentralized, unpredictable, and weather-dependent, the ability to move electricity more fluidly from generation to load centers will be essential. The deployment of automation capability will be necessary to manage the voltage volatility associated with higher levels of DERs. The use of data analytics can ensure transmission investments are made prudently, to maximize benefits.

Because DERs rely on the distribution system, it must be resilient and reliable, so that it can operate for DERs in the same way the transmission system operates for large, centralized generators.

Transforming the distribution grid will allow the company to use the distribution system differently than it does today. Infrastructure resilience, advanced metering infrastructure, a customer information platform, intelligent grid devices, automated control systems, and advanced analytics will enable the company to improve operations (e.g., through more efficient power restoration, fewer truck rolls, more predictive and efficient maintenance, and increased visibility). They also will help Dominion Energy better forecast load shape and better predict behaviors, enabling the company to identify and fix grid problems before an outage occurs. All of this should produce a better, more informed customer experience.

Energy Efficiency

Dominion Energy offers an extensive menu of efficiency programs for both residential and commercial customers. Additionally, the company annually solicits designs and recommendations for a broad range of demand-side management (DSM) programs. Dominion Energy South Carolina invested over \$128 million from 2009-2019 in demand-side management programs, resulting in cumulative energy savings of 868 million kilowatt-hours. Under the Virginia Grid Transformation and Security Act of 2018, the company is expected to propose \$870 million of spending on energy efficiency by 2028, and the VCEA set a target of 5 percent energy-efficiency savings (based on 2019 jurisdictional electricity sales) by 2025. Dominion Energy Virginia has sought approval of new DSM programs from the State Corporation Commission — including 22 new programs in the last two years — to achieve progress toward these targets.

On the gas side of our business, our ThermWise program provides visits by experts to design in-home energy conservation plans for customers in our Western-state operations. ThermWise also provides funds for extensive home retrofits and furnace and duct replacements for low-income customers in Utah and Idaho. Nearly 80,000 customers participated in the ThermWise programs in 2019 and achieved natural gas savings of greater than 1.1 million dekatherms. Over \$23.5 million was spent for energy-efficiency programs. The natural-gas savings were equivalent to more than 58,000 metric tons of CO₂ avoided in 2019 — akin to taking more than 12,600 internal-combustion passenger cars off the road for that year. Dominion Energy North Carolina is proposing to expand its existing conservation programs to reflect an increased commitment to sustainability, provide customers a broader range of options to conserve natural gas more wisely, and better serve underserved communities. The company's proposals will double the number of programs and significantly increase the program budget to accommodate customer sustainability preferences.

In addition, Dominion Energy Virginia operates an already very efficient transmission and distribution system by the extensive use of higher voltages — 500kV at the transmission level and 34.5kV at the distribution level — than those used by many peer utilities. Dominion Energy Virginia made this deliberate choice because higher voltages translate to lower current flows (and therefore lower losses) while providing additional grid capacity. Another example of an opportunity to reduce customer consumption and emissions is the use of hybrid gas-electric heating arrangements. One such approach would be for Dominion Energy customers to install electric air-source heat pumps to replace their air-conditioning-only units. Although those electric heat pumps provide space heating, these hybrid customers would maintain their natural gas furnaces to provide back-up heating when it is particularly cold, or when intermittent renewable generation is particularly low. Customers would still be able to achieve a major reduction in natural-gas demand for space heating by using the heat pump much of the year, but instead of installing backup electric heating, the customer would continue to use gas furnaces to meet peak heating loads.

Customizable Customer Products

Dominion Energy already offers a number of renewable-energy options for customers, from net metering for electric customers to GreenTherm for natural gas customers. Transformation of the electric grid, the emergence of DERs, and ever more advanced artificial intelligence should enable the company to provide an even wider array of products and services, including bespoke energy plans.

As noted in the section on microgrids above, those could include premium-quality electricity service for customers with the most sensitive needs. Other options might include plans for customers who want to support offshore wind; time-of-use plans enabling customers to save money by scheduling certain energy uses (e.g., EV charging) during off-peak hours; or carbon-offset programs to reduce residential carbon footprints even further.



On the gas side of our business, our ThermWise program provides visits by experts to design in-home energy conservation plans for customers in our Western-state operations.



As climate change progresses and severe weather worsens, a resilient grid will become more important to maintaining system reliability.

Resilience

System Hardening

As climate change progresses and severe weather worsens, a resilient grid will become more important to maintaining system reliability. On the distribution grid, Dominion Energy uses the National Electric Safety Code's (NESC) combined ice and wind loading criteria as the basis for design standards for typical distribution facilities. The company anticipates designing all future construction to meet the stronger of the NESC's heavy loading criteria for combined ice and wind, or the extreme-winds criteria of the American Society of Civil Engineers. This will lead to a stronger, more resilient distribution grid by dictating larger poles and shorter spans between them. Additional standards include establishing a minimum pole class across the system, requiring deeper pole setting or select backfill in areas with poor soil, expanding the use of fiberglass cross-arms, and using upgraded insulators.

Dominion Energy's Electric Transmission groups take proactive measures to meet the resiliency challenges of climate change and increasingly frequent severe weather. Active engagement with national labs and peer utilities, both domestically and worldwide, along with advanced data analytics and network simulations, ensures alignment with industry best practices for the design and maintenance of transmission and substation infrastructure. Design standards are evolving to address severe weather challenges through improved asset management, condition-based maintenance, and the latest equipment-hardening research and designs. Innovations such as mobile transmission infrastructure, gas-insulated substations, hardened bulk power transformers and accessories, physical and cyber security systems for substations, light detection and ranging (LIDAR), and Real Time Digital Simulators (RTDS) offer rapid and optimized maintenance and construction, hardened infrastructure, and service restoration.

The natural gas side of our business has a record of extremely reliable service. In a typical year, its customers rarely experience any service interruption. To maintain that level of performance — and even improve it — we have put several programs in place that focus on both pipeline maintenance and pipeline replacement. These include new infrastructure programs, remote sensing, around-the-clock monitoring, and remote-controlled shutoff valves to prevent, isolate, and repair any deficiencies.

System Restoration and Black Start

Large-scale blackouts harm the public, the economy, and the electric grid. A “black start” — the restoration of critical electric services without the presumption of assistance from neighboring utilities — is a crucial element of Dominion Energy’s resilience posture. Black-start units provide safe shutdown for nuclear units, support critical gas infrastructure, and provide power to start additional generators. Black-start generators are designed to start up and run without support from the power grid; this is essential in the event of a major system collapse or a system-wide blackout. Black-start units have high availability, dispatchability, and controllable generating capability. These necessary qualities are not easily obtained for renewable generation resources,

causing challenges to future black-start restoration plans that will need to be studied and resolved.

System Planning and Reliability

The digital economy has made safe, reliable, and consistent delivery of power more important than ever. That importance will only increase as transportation and other activities transition to electric energy. As a result, system planning will play an ever more crucial role in the operation of the electric grid — a role rendered more complex by the widespread transition to renewable energy resources connected at both the transmission and distribution levels.

As noted earlier, DERs impose two-way flows of electricity on a distribution system designed for one-way flows. In addition, the intermittent nature of some DERs creates power fluctuations not typical of traditional generation. Propagated in an arbitrary manner, DERs can disrupt grid power quality and reliability. Avoiding such outcomes will require investments to increase visibility into, and control of, the distribution system.

With respect to transmission, the clean-energy transition can be defined by three key changes — a change of scale, a change of physics, and a change of interfaces.

Our nation's bulk electric grids have grown up around large generating stations and load centers. The clean-energy transition is building upon that infrastructure, but the scales are different and the hyper-connected vertices are no longer aligned with the largest and strongest energy sources. For example, Dominion Energy Virginia's traditional generation fleet historically has included a couple dozen sites — many with nameplate capacities well exceeding 100 megawatts. However, in



2021 the company's renewable generation fleet is nearing almost 100 sites. By the end of this decade that number will likely exceed 400 sites. Most of these sites have nameplate capacities well under 100 megawatts. Fundamentally, this is a change of scale. To accommodate tomorrow's clean-energy generation sources, the grid will need to grow and change substantially as more renewable resources connect in places with currently limited transmission and distribution infrastructure.

A change in physics is also in play. The operation, protection, and control of the grid is based on fixed and repeatable physics intrinsic to large, rotating generators. These physics, which to some extent provide the grid "self-healing" capabilities, are receding into history as a highly dynamic

and nonlinear physics emerges with renewable resources. This shift will necessitate new performance indicators to maintain and improve the grid's reliability and resilience.

The shift to renewable energy also entails a shift to silicon-based resources that puts a computer at the heart of the generation/grid interface and creates software-defined interactions with the grid.

While there are advantages and disadvantages to these changes, maintaining reliability and resilience will present planning and operational challenges that will require an amalgam of grid capacity upgrades and new installations, investments in capability and flexibility (FACTS), and a broad spectrum of new technologies.

By the end of this decade, the company's renewable generation fleet will likely exceed 400 sites.



Metrics and Targets

Exhibit 16

Interim Scope 1 Emissions Reduction Targets

To achieve company-wide Net Zero carbon and methane emissions

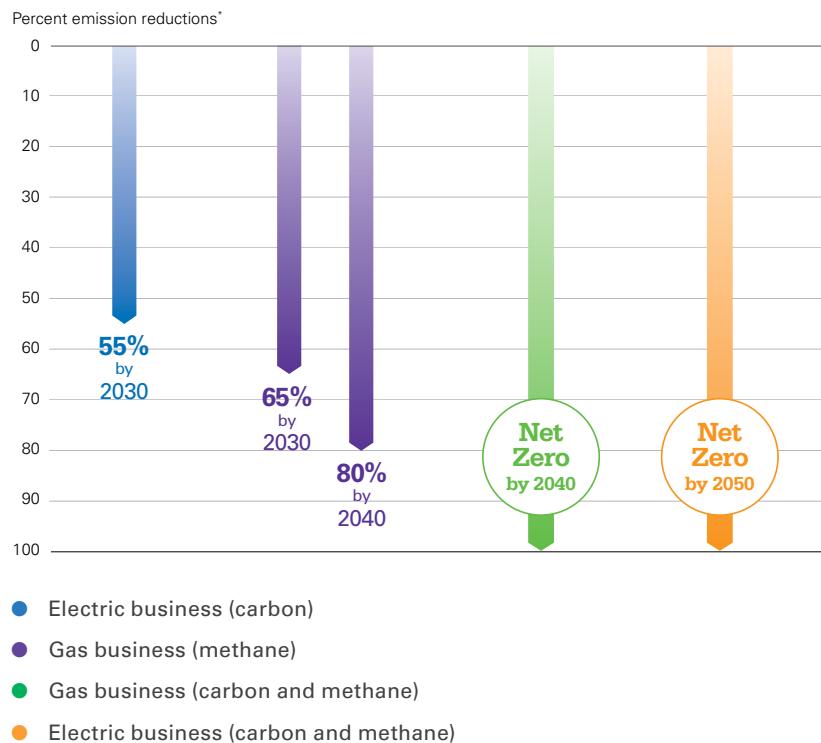


Exhibit 17

Scope 1 Emissions Reduction Progress

From through 2019*

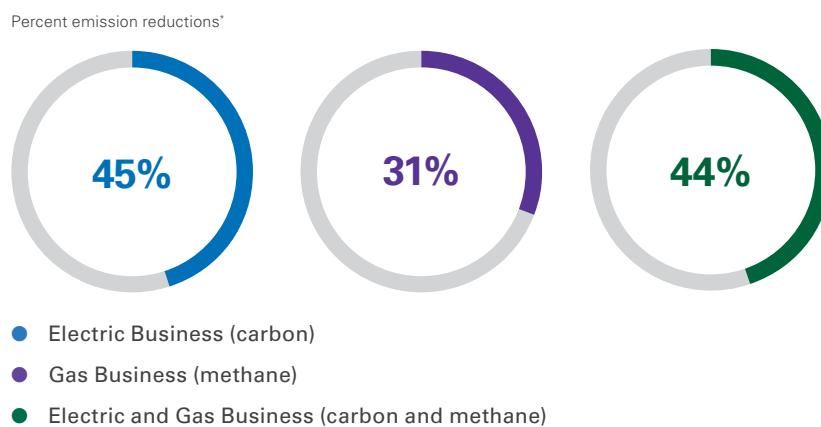
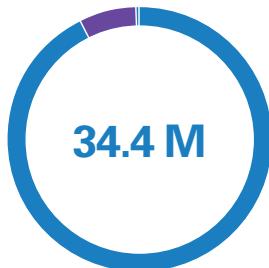


Exhibit 18

2019 Dominion Energy GHG Emissions

Scope 1 Emissions
(MT CO₂e)



Scope 2 Emissions
(MT CO₂e)



Scope 3 Emissions³
(MT CO₂e)



- 92.5% Power Generation¹
- 7.2% Gas Business
- 0.3% Additional Scope 1²

- 100% Third Party Electricity

- 47.3% Customer End Use *LDC*
- 31.0% Purchased Power
- 14.2% Upstream Fuel Supply
Power Generation
- 6.4% Upstream Fuel Supply *LDC*
- 1.1% Solar Supply Chain Emissions

¹ Power Generation emissions includes CO₂ emissions of 31.7 MMT and methane emissions from the power sector of 0.05 MMT CO₂e.
Gas Business emissions include CO₂ emissions of 0.7 MMT and methane emissions of 1.7 MMT CO₂e.

² Includes vehicle fleet at 0.05 MMT, corporate jet at 0.006 MMT, and building heat at 0.04MT.

³ Includes only those categories shown.

Conclusion

Dominion Energy's longstanding dedication to environmental stewardship is guided by a strong governance framework and is incorporated into the company's corporate strategy and risk management processes. As the effects of climate change begin to emerge globally, Dominion Energy has a vital role to play in limiting our emissions trajectory consistent with the Paris Agreement targets. However, our efforts are not limited to reducing our carbon footprint. We are also enhancing the resilience of our operations and strategies to mitigate exposure to the systemic risks of climate change, while engaging in scenario analyses to guide our decision-making and enhance our carbon transparency.

This report captures a snapshot of the potential national transition to a cleaner energy system and a clean electricity system. The changes considered reflect a shift not only in the physical assets used to support energy needs, but also developments that could have a significant impact on our customers. The shift presented herein is only one of many possible market shifts. While the results provide helpful comparative assessments of scenarios that Dominion Energy may pursue, this report does not consider all possible sensitivities. Nonetheless, the scenarios presented illustrate the strong potential for Dominion Energy to achieve its climate goals in a reasonable time frame and at a reasonable cost.

Dominion Energy intends to engage in ongoing scenario analysis and to monitor, pilot, and further encourage technological development. Technology advancements in storage, carbon capture, fuel cells, and nuclear power will determine which technologies prevail and what assumptions are embedded in future carbon analyses. It is critical to promote activities and policies that transform these tools into platforms capable of supporting a clean-energy economy.

As Dominion Energy transitions to Net Zero, careful consideration is being given to each business area for solutions that can accelerate decarbonization and help limit stakeholder exposure to risks, while never straying from our mission of providing safe, affordable, and reliable service to our customers.



The scenarios presented illustrate the strong potential for Dominion Energy to achieve its climate goals in a reasonable time frame and at a reasonable cost.

TCFD Mapping

TCFD Mapping	Disclosure	Reference
Governance	Describe the Board's oversight of climate-related risks and opportunities.	Governance; Board of Directors
	Describe management's role in assessing and managing climate-related risks and opportunities.	Governance; Management
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Strategy Risk Management Transition Opportunities
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Risk Management Transition Opportunities Dominion Energy Net Zero Scenarios
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Dominion Energy Net Zero Scenarios
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks.	Risk Management; Overview
	Describe the organization's processes for managing climate-related risks.	Risk Management; Overview
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Risk Management
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Risk Management Metrics
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Metrics
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Strategy; Net Zero Metrics

Core Elements of Recommended Climate-Related Financial Disclosures*



Governance

The organization's governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management

The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

*Source: Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures

CONTINUED

Forward Looking Statement

Factors that could cause actual results to differ include, but are not limited to:

- unusual weather conditions and their effect on energy sales to customers and energy commodity prices;
- extreme weather events and other natural disasters;
- extraordinary external events, such as the current pandemic health event resulting from COVID-19;
- federal, state, and local legislative and regulatory developments;
- changes to regulated rates collected by Dominion Energy;
- timing and receipt of regulatory approvals necessary for planned construction or expansion projects and compliance with conditions associated with such regulatory approvals;
- the inability to complete planned construction projects within time frames initially anticipated;
- changes to federal, state and local environmental laws and regulations, including those related to climate change;
- cost of environmental compliance;
- changes in implementation and enforcement practices of regulators relating to environmental standards and litigation exposure for remedial activities;
- changes in operating, maintenance and construction costs;
- additional competition in Dominion Energy's industries;
- changes in demand for Dominion Energy's services;
- receipt of approvals for, and timing of, closing dates for acquisitions and divestitures;
- impacts of acquisitions, divestitures, transfers of assets by Dominion Energy to joint ventures, and retirements of assets based on asset portfolio reviews;
- the expected timing and likelihood of completing a sale of Dominion Energy Questar Pipeline and certain other affiliated entities, including the ability to obtain the requisite regulatory approvals and the terms and conditions of such regulatory approvals;
- adverse outcomes in litigation matters or regulatory proceedings;
- fluctuations in interest rates;
- changes in rating agency requirements or credit ratings and their effect on availability and cost of capital;
- and capital market conditions, including the availability of credit and the ability to obtain financing on reasonable terms.

Other risk factors are detailed from time to time in Dominion Energy's quarterly reports on Form 10-Q and most recent annual report on Form 10-K filed with the Securities and Exchange Commission. Dominion Energy undertakes no obligation to update any forward-looking information statement to reflect developments after the statement is made. Projections or forecasts shown in this report are based on the assumptions listed in this document and are subject to change at any time. Historical information was calculated using data available at the time of the calculation and may be subject to revision.

Credits

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