Commonwealth of Virginia
Office of the Governor

Executive Order

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EXPANDING ACCESS TO CLEAN ENERGY AND GROWING THE CLEAN ENERGY JOBS OF THE FUTURE

Importance of the Issue

The energy industry serves as the backbone of the Commonwealth's economy. Individuals, communities, and businesses need energy systems that are both reliable and affordable. At the same time, Virginia is beginning the transition to a more modern electric grid that will incorporate technological advances and meet the changing needs of customers.

Yet Virginia's policy structures have historically focused on the traditional power sector model of large, centralized power stations and conventional transmission and distribution infrastructure. In the coming years, renewable energy technologies and distributed energy resources such as rooftop solar, smart meters, and battery storage are likely to make up an ever-increasing share of our energy system. Similarly, it is anticipated that larger portions of the economy, such as transportation, building heating, and some industrial processes will rely increasingly on electricity.

As Virginia begins to shift to a more modern electric grid that is reliable, affordable, resilient, and environmentally responsible, the Commonwealth must continue to prioritize the transition to cleaner sources of energy, like wind, solar, and energy efficiency through an equitable approach to benefit all Virginians. The policies that we implement must be both forward-looking and adaptive to enable the energy transformations that are beginning. We must also ensure that the modernization of our electric grid is done in a way that prioritizes carbon-free sources of electricity to reduce our environmental impact and mitigate the impacts of climate change.

Climate change is an urgent and pressing challenge for Virginia. As recent storms, heat waves, and flooding events have reminded us, climate disruption poses potentially devastating risk to Virginia. The electric power sector represents approximately 30% of the carbon dioxide emissions in Virginia and is central to our efforts to address the problem. The reports from the United Nations Intergovernmental Panel on Climate Change and Fourth National Climate

Assessment make clear that swift decarbonization and a transition to clean energy is required to meet the urgency of the challenge.[1]

Clean energy advancements offer an opportunity to address and prevent energy inequities facing Virginia's most vulnerable populations, including low-income communities and communities of color. Low-income households pay proportionately more than the average household for energy costs and often experience negative long-term effects on their health and welfare.[2] Research from the American Council for an Energy-Efficient Economy states that "the overwhelming majority of single family and multifamily low-income households (those with income at or below 80% of area median income), minority households, low-income households residing in multifamily buildings, and renting households experienced higher energy burdens than the average household in the same city."[3] Clean energy innovation and energy efficiency strategies can alleviate this burden, lower energy bills, and provide access to clean energy for all Virginians. No segment of the population should bear disproportionately high or adverse effects from pollution and climate disturbance, and as we increase investments in clean energy, equity must be part of the framework. The U.S. Environmental Protection Agency describes equitable development as "an approach for meeting the needs of underserved communities through policies and programs that reduce disparities while fostering places that are healthy and vibrant."[4]

Virginia is well positioned to be a center of economic activity for this clean energy transition, and having this economic activity will help us capture the economic and health benefits from the clean economy for all Virginians. The clean energy sector has the power to create new business opportunities, expand customer access to renewable energy, and spark the high-demand jobs of the 21st century. Today, Virginia has more than 3,000 megawatts (MW) of solar currently in service or under development.[5] In the last year, the number of solar jobs in Virginia has increased by nearly ten percent to 3,890 jobs.[6] Additionally, the Commonwealth is home to 78,670 individuals who work in the energy efficiency sector, with 2,049 jobs added in the last year.[7] The continued growth of clean energy investment in the Commonwealth has the potential to bring about long-term sustainable economic development while also mitigating the impacts of climate change through reduced carbon dioxide emissions.

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[1] *See* Report of the United Nations Intergovernmental Panel on Climate Change, October 2018, *available at* https://www.ipcc.ch/sr15/; Fourth National Climate Assessment, November 2018, *available at* https://nca2018.globalchange.gov/downloads/.

[2] Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities, April 2016, American Council for an Energy-Efficient Economy, *available at:* https://assets.ctfassets.net/ntcn17ss1ow9/1UEmqh5l59cFaHMqVwHqMy/1ee1833cbf370839dbbdf6989ef8b8b4/Lifting_the_High_Energy_Burden_0.pdf.

[3] *See id.*

[4] U.S. Environmental Protection Agency, Equitable Development and Environmental Justice, *available at:* https://www.epa.gov/environmentaljustice/equitable-development-and-environmental-justice.

[5] Solar Tracking Data, Department of Mines Minerals and Energy.

[6] National Solar Jobs Census 2018*,* The Solar Foundation, *available at* http://www.thesolarfoundation.org/national/.

[7] U.S. Energy and Employment Report 2019 - Virginia, National Association of State Energy Officials and Energy Futures Initiative, *available at* https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5c7f425b4785d349f2f021b7/1551843931999/Virginia.pdf.

With these two principles in mind – the need to support policies that enable the modernization of our electric grid and the potential for significant new job growth in the clean energy sector – the Commonwealth must establish ambitious goals and work with stakeholders across the industry to identify areas of growth.

Executive Action

Accordingly, by virtue of the authority vested in me as Chief Executive by Article V of the Constitution of Virginia and under the laws of the Commonwealth, I hereby direct all executive branch agencies, authorities, departments, and all institutions of higher education, to every extent practicable, to operate in accordance with the following guidelines:

A. The Director of Department of Mines, Minerals and Energy (DMME), in consultation with the Secretary of Commerce and Trade, the Secretary of Natural Resources, and the Director of the Department of Environmental Quality (DEQ), shall develop a plan of action to produce thirty percent of Virginia's electricity from renewable energy sources by 2030 and one hundred percent of Virginia's electricity from carbon-free sources by 2050. The plan shall include the following resource considerations:

    1. **Solar and Onshore Wind Energy**: Solar and onshore wind energy are competitively priced energy resources that have the potential to provide significant economic development and job creation opportunities across the Commonwealth. Pursuant to energy legislation I signed last year (Senate Bill 966), Virginia has a statewide goal of achieving 5,500 MW of wind and solar energy by 2028. At least 3,000 MW of this target should be under development by 2022. In furtherance of this goal, Dominion Energy has committed to annually procure up to 500 MW of utility-scale solar and onshore wind projects through a competitive procurement process. Dominion has also committed to annual procurements of smaller-scale solar energy, including rooftop solar, through a competitive procurement process that will be issued annually beginning in 2019. These procurements will start at 50 MW and will scale up to 150 MW by January of 2022. Appalachian Power also initiated a competitive procurement process for 200 MW of utility-scale solar projects in Virginia, with projects to be operational by the end of 2021. In order to make certain these utility-scale and smaller-scale projects move forward, DMME's plan must provide recommendations on actions to ensure the utilities meet these procurement targets and meet the requirement that all such projects are procured competitively, with at least twenty-five percent of such projects procured through power-purchase agreement (PPA). Furthermore, the plan shall include any legislative or executive recommendations to reduce barriers to achieving these solar and onshore wind goals.

    2. **Energy Efficiency**: Energy efficiency programs are the lowest cost energy option, producing electricity cost savings, creating jobs and revenue from the energy efficiency service sector, and helping to reduce greenhouse gases and other air pollutants. Virginia has a statewide goal of reducing retail electricity consumption by ten percent by 2022 using 2006 as a baseline. These reductions will come from a combination of sources, including building codes, energy performance contracting,

private financing programs, and investments from the Commonwealth's utilities. As part of Senate Bill 966, Dominion Energy will invest $870 million and Appalachian Power will invest $140 million in energy efficiency programs over the next decade. The legislation further states that at least 5 percent of these ratepayer-funded programs should be directed toward low-income, elderly, and disabled persons. To meet these spending goals, Dominion Energy should increase spending to $100 million per year by 2019 and Appalachian Power should increase spending to $15 million per year by 2019, excluding lost revenue recovery. DMME's plan shall provide recommendations to support implementation of this increased utility investment in energy efficiency programs. DMME shall work with the Virginia Resources Authority, Virginia Small Business Financing Authority, Virginia Housing Development Authority, and the Virginia Department of Housing and Community Development to include complementary policy options in the plan, such as developing and administering energy financing programs and enhancing building codes.

3. **Offshore Wind**: The offshore wind industry in the United States is on the cusp of a major boom that could see America become one of the largest offshore wind markets in the world. Virginia currently has a 12 MW demonstration project under construction, which will serve as a research and development project as Virginia moves forward with the development of our larger offshore wind energy area. The larger offshore wind energy area could supply as much as 2,500 MW of offshore wind, and it should be fully developed by 2026. The plan shall include recommendations on the timeline and steps needed to achieve this offshore wind target, including working with Dominion Energy and the U.S. Bureau of Ocean Energy Management to submit the Construction and Operation Plan (COP) by 2021 with construction beginning by 2024.

4. **Energy Storage**: As the Commonwealth integrates more renewable energy resources, balancing the intermittency of the grid through energy storage will become increasingly important. Senate Bill 966 requires Dominion Energy to develop a 30 MW battery storage pilot program and Appalachian Power to develop a 10 MW battery storage pilot program. Further, pumped hydroelectric storage facilities are now deemed in the public interest, and other sources of utility-scale storage are starting to become commercialized. The Plan shall include integration of storage technologies into the grid and pairing of such storage technologies with renewable generation, including distributed energy resources like rooftop solar.

5. **Energy Equity:** The plan shall also address issues related to equity and environmental justice so that the clean energy and climate goals outlined in this Order are achieved in a just manner that advances social, energy, and environmental equity. These clean energy resources shall be deployed to maximize the economic and environmental benefit to underserved communities while mitigating any impacts to those communities. The Plan shall include measures that provide communities of color and low- and moderate-income communities access to clean energy and a reduction in their energy burdens.

The Director of DMME shall report monthly to the Secretary of Commerce and Trade on the progress of these efforts, and shall submit the final plan to the Governor by July 1, 2020.

B. The Commonwealth shall procure at least 30 percent of the electricity under the statewide electric contract with Dominion Energy from renewable energy resources by 2022. The Commonwealth has the potential to add significant low-cost solar and wind energy projects that will serve as a hedge against uncertain energy prices while helping to spur job creation opportunities in both the solar and onshore wind market. Virginia currently has an eight percent renewable energy procurement target that equates to approximately 110 MW of renewable generation. This target is currently accomplished through investment in both utility-scale solar energy facilities and smaller solar energy facilities contracted with third-party renewable energy developers. Since the original eight percent target was established, the price of solar and wind resources in Virginia continues to drop and serves as an important hedge against fluctuating energy and fuel costs. Virginia now has the potential to achieve at least 30 percent of generation from renewable resources through both utility-scale onshore wind and solar investments as well as smaller solar installations accomplished through PPA. To achieve this 30 percent target, the Secretary of Commerce and Trade, DMME, and the Department of General Services (DGS) shall negotiate amendments to the statewide Dominion energy contract to include the additional purchase of energy from utility-scale onshore wind and solar facilities. Additionally, to accommodate the procurement of smaller-scale PPAs, DMME shall annually initiate a competitive procurement process for smaller-scale PPAs at the Commonwealth's existing facilities, with the first competitive procurement issued in the fall of 2019 for at least 10 MW of cumulative distributed solar at state facilities annually. DMME shall work with DGS and all interested facilities in the development of the competitive process. Additionally, for newly-constructed buildings, all executive branch agencies and institutions shall evaluate the use of distributed solar resources during the design and engineering process.

C. The Commonwealth shall reduce electricity consumption across all of the Commonwealth's agencies and institutions through development and execution of a comprehensive Resource Conservation Management Plan (RCMP). DMME shall, in coordination with DGS and DEQ, develop a RCMP as the framework to achieve the state's portion of the goal of reducing retail electricity consumption by ten percent by 2022 using 2006 as a baseline. The RCMP should include recommendations on reducing energy usage through measurement and tracking, operations and maintenance, and capital investment. It should cover both the existing building stock as well as new construction. As part of the RCMP framework, all state agencies and institutions should utilize energy performance contracting (EPC) to reduce energy consumption. EPC is a budget neutral, cost-effective tool that allows state agencies and publicly-owned facilities to reduce their deferred maintenance backlogs without adding any financial burden to the taxpayer. To date, more than 240 EPC projects have been completed by state and local agencies in Virginia, valuing nearly $900 million in savings for the Commonwealth. DMME has managed the program since 2002, providing robust technical assistance to localities and

state agencies considering EPCs. To facilitate additional deployment of EPC, DMME shall produce a ranking of the top facilities that have achieved energy reductions and a list of facilities that most need improvement. DMME shall work with DGS and other agencies and executive branch institutions to double the 2018 total annual level of EPC contracting investment. All executive branch agencies and institutions shall work with DMME to conduct a general energy audit with the goal of implementing an EPC by 2022. For executive branch agencies that have already employed EPC, overall energy consumption should be re-evaluated to identify areas for further energy efficiency improvements.

D. To ensure that the Commonwealth has the workforce in place to meet the growing needs and technological advancements of the clean energy sector, the Chief Workforce Advisor and the Secretary of Commerce and Trade shall work with stakeholders to develop an energy workforce plan. Such plan shall include an evaluation of current curriculum and training programs, including K-12 curriculum and the potential for pre-employment programs. The plan shall address both awareness of energy sector career opportunities and access to career pathways and programs. The plan shall include specific recommendations for creating pathways out of poverty through careers in renewable energy and energy efficiency. The plan should also leverage existing efforts, including the Virginia Energy Workforce Consortium and Build Virginia.

Effective Date of the Executive Order

This Executive Order shall be effective upon its signing and shall remain in full force and effect unless amended or rescinded by further executive order.

Given under my hand and under the Seal of the Commonwealth of Virginia this 16th day of September, 2019.

Ralph S. Northam, Governor

Attest:

Kelly Thomasson, Secretary of the Commonwealth