Governor Northam’s Executive Order 43: One Stone and Two Birds for Virginia Energy Policy

Antonia M. Douglas

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I. INTRODUCTION

From the Appalachian Mountains to the sandy shores of Virginia Beach, the effects of climate change are affecting Virginians, whether they know it or not. Currently, there are 260,000 people at risk of inland flooding. In Hampton Roads, it is not an unfamiliar sight that after a storm to see the streets swamped by high tides and rainwater blocking in residents from getting in and out of their neighborhoods. Naturally, the eastern shore is seeing the effects of climate change at a much faster rate due to land subsidence and a higher rate of relative sea-level rise. One Norfolk tide gauge reports the equivalent of 18.2 inches of relative-sea-level rise in the past 100 years, more than twice as much as the global average. Also, the world’s largest Naval station has started to adapt by elevating its piers and studying how the floods will affect their readiness.

Nearby, the Chesapeake Bay, a real gem to Virginia, has been experiencing a degradation in health with the warming water...
temperatures. The rise in temperature can have adverse effects on the wildlife that supports the economy in the region and therefore cause local economies to suffer. Moving west, the Appalachian Mountains face the reality that with higher temperatures and more frequent droughts wildfires will occur, transforming the once iconic landscape. Even though rainstorms are producing more substantial rainfall, the southeast is at risk for a more extended wildfire season and more frequent droughts. The effects of climate change in Virginia are apparent and affecting the well-being of Virginians every day.

Looking at Virginia, there is no running away from the fact that climate change will touch every corner of the Commonwealth. Whether it be the fate of our historic sites in Williamsburg, the crop yield in the Shenandoah Valley, or an even more miserable pollen season in Richmond. Even more daunting is what climate change means for the health of Virginians. An extended mosquito season, extreme heatwaves, droughts, and wildfires will all affect public health. These are putting 160,000 vulnerable Virginians at risk. There is hope that these effects of climate change can be slowed down or even mitigated with drastic changes in our energy sector. The energy sector is one of the biggest polluters when it comes to greenhouse gas emissions (GHGs), not only in the country but in each state. Many states are responding to global calls for clean energy and making actual changes in the climate change crisis. Today the energy sector accounts for thirty percent of the carbon dioxide emissions in Virginia. To stimulate change in the state,

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6 Id.
7 Id.
8 Id.
9 Id.
10 Id.
11 Id.
12 Id.
Virginia needs steadfast change to its energy sector. Virginia is currently in limbo between clinging to their old roots and attempting to turn the page on a new chapter of clean energy. Climate Change is present and endangering Virginia’s health and communities, bringing stronger storms, harsher droughts, and rising temperatures. Recently the Virginian people, government, and large businesses have pushed back on Dominion, calling for cleaner energy. The Virginia Government and Dominion Energy are finally coming together to power the state’s electrical sector by thirty percent renewable energy by 2030 and 100 percent carbon-free by 2050. This change did not happen overnight but took a series of events that eventually led Dominion to invest significant amounts of money into cleaner and more sustainable energy.

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18 Robert Walton, *Dominion Launches Electric School Bus Initiative, Aims for 100% Electric Fleet in Virginia territory by 2030*, UTILITY DIVE (Aug. 30, 2019) https://www.utilitydive.com/news/dominion-launches-electric-school-bus-initiative-aims-for-100-electric-fl/562021/ (referencing how Dominion has started to invest millions into clean energy technology one being electric school buses, which will help increase the infrastructure needed for electric vehicles in the state). E.g., Ivy Main, *At Long Last, Dominion Decides It’s Game on for Offshore Wind*, POWER FOR THE PEOPLE VA (June 3, 2019), https://powerforthepeopleva.com/2019/06/03/at-long-last-dominion-decides-its-game-on-for-offshore-wind/ (referencing that Dominion has invested $880 million in offshore wind and agreed to
More recently, Governor Northam enacted Executive Order 43, which set a thirty percent renewable energy goal by 2030 and a 100 percent carbon-free goal by 2050 for Virginia. Governor Northam’s Executive Order 43 was an exciting and monumental moment for the Commonwealth. But what does the order say and mean for Virginians? Although this order is promising, the language within the order and current Virginia law still allow for conflict moving forward. This order is a one stone and two bird situation because the order itself not only makes the people of Virginia believe that they are getting clean energy, but it also makes Dominion Energy very happy with the loopholes created. Overall, it comes down to two words in the order “carbon-free.” These two tiny words pack a lot of punch to where Virginia is truly heading. Virginia has the potential of being a significant player in renewable energy development and innovation in the south. But what do these changes mean for Virginia and its electric grid? Also, what does it mean for the region when it comes to renewable energy policy and development? Only time will tell where Virginia is going, but this is a promising start to a clean and sustainable future.

First, Part I gives an overview of the issue, the history of Virginia Utility legislation, and explains the current efforts by Dominion Energy and the public response. Second, Part II compares Executive Order 43 to current Virginia laws for overlaps in current Virginia law. Third, Part III looks at the current gaps in Virginia law to determine why they are preventing clean energy development today and the need for the Executive Order. Lastly, Part IV gives a series of policy recommendations for how Virginia lawmakers can implement clean energy in the state and an update on what has happened since the order.

19 See Executive Order 43, supra note 17.
A. History of Virginia’s Energy Legislation

Since its founding in 1607, Virginia has been the land of American economic entrepreneurship and opportunity, and this is no different in the energy sector today. Virginia is a place where change is happening at a faster rate than people even realize. This change is something that companies like Dominion Energy, and the State Government, must come to terms with if they want to stay afloat. In the realm of energy law, Virginia has a unique run at regulating both Virginia Electric & Power Company (“Dominion”) and Appalachian Power Company (“APCo”).

Traditionally, utilities have been allowed to conduct business in their regions without competition because they are natural monopolies and provide an essential service to the public. When the states allowed utilities to be monopolies, the utilities agreed to be regulated by the State Corporation Commission (“SCC”). This concept is the “regulatory compact,” which has governed public utility operations in the United States since the 1800s. The SCC, or similar entities in other states, determine when utilities may raise their rates or build new facilities such as power plants and transmission lines. There have been three phases of regulating the two major energy suppliers in the state. First, the pre-1999 regulation where SCCs regulated utilities under the traditional monopoly model. Second, deregulation of utilities starting in 1999. Lastly, the re-regulation of utilities in 2007 through the Re-Regulation Act.

Before 1999, Title 56 of the Virginia Code regulated Dominion and APCo. Chapter 10 gave the SCC the authority to set elec-

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20 See Shepherd, supra note 15.
21 JONATHAN A. LESSER & LEONARDO R. GIACCHINO, FUNDAMENTALS OF ENERGY REGULATION 17 (2nd ed. 2013) (explaining that private utilities are referred to as public utilities because they are providing an essential service to the public without discrimination).
23 LESSER & GIACCHINO, supra note 21.
24 GREENEHURLOCKER, PLC, supra note 22.
25 Id.
tric rates based on the utility cost of service, establish a rate of return, and authorize profit level after a consideration of factors including risk and general economics. The rate of return is crucial because the rate must be high enough that investors will want to invest in projects and will also compensate them for the risk they took to provide the utility with capital. In 1999, the General Assembly attempted to restructure Virginia’s energy market by passing a law that would bring competition into the state for electric generation. After eight years, the General Assembly determined that the law did not bring in significant competition into the state and that the deregulation of the electric market should not move forward. In 2007, the General assembly re-regulated Dominion and APCo by passing a comprehensive law, the Re-Regulation Act.

The new regulatory system established by the 2007 Re-Regulation Act is one that is unique to Virginia and strays from the regulation found in Title 56. The Re-Regulation Act set new procedures for creating utility’s rates and earnings, including a biennial review of rates. Also, the Act established financial incentives and bonuses for the utilities, including rate adjustment clauses (RACs), enhanced rate of return bonuses for the construction of certain types of generation facilities, and limitations on the SCC’s ability to reduce a utility’s rate of return. The General Assembly has amended the Re-Regulation Act several times since 2007, but the two significant amendments happened in 2013 and 2014. These amendments lead to a frustrated public. For example, the 2014 amendment allowed Dominion to avoid refunding customers at least $188 million in excess profits. To make matters worse, Senate Bill 1349 passed in 2015, which prohibited the SCC from cutting

26 Id.
27 See id.; LESSER & GIACCHINO, supra note 21, at 36
28 GREENEHURLOCKER, PLC, supra note 22, at 4.
29 Id.
30 Id.
31 Id.
32 Id. at 4, 12.
33 Id.
34 Id. at 20.
35 Id.
APCo’s or Dominion’s rate for several years even if the SCC determined the prices were too high. In 2017, the SCC found that these rate freezes allowed for APCo to earn an excess of $28 million and Dominion to earn a surplus of $252 million in 2016. The biggest question asked was whether it was going into new renewable energy and efficiency projects or in their pockets? The simple answer to that question is no for renewable energy and efficiency, but now things are starting to change.

The Re-Regulation Act also contains three sections that promote clean energy development. First, the Act provided for a voluntary renewable energy portfolio standard (“RPS”) program. Usually, an RPS is a mandatory program that requires utilities to obtain a certain percentage of their power sales from renewable energy sources. In Virginia, the RPS is not mandatory and is mainly in the public interest for the two utilities to satisfy the RPS goals, and allows them to recover reasonable costs for participation. Second, the Act also gave Virginians the right to participate in renewable energy net metering programs. Virginia’s net metering law permits customers to operate renewable energy facilities on their property to offset all or part of their energy usage. Lastly, in 2008, the General Assembly required APCo and Dominion to submit integrated resource plans (IRPs). Dominion and APCo are required to file IRPs annually, including a forecast of the utility’s future load obligations and plan to meet customer demand over the next fifteen years. Next, the SCC reviews the utility’s IRP to determine whether it is reasonable and in the public interest. Lastly, during the IRP process, consumer advocates, environmental organizations, and other interested parties are permitted to review and comment on

36 Id.
37 Id.
38 LESSER & GIACCHINO, supra note 21, at 375.
39 GREENEHURLOCKER, PLC, supra note 22, at 24.
40 VA. CODE ANN. § 56-594.
41 GREENEHURLOCKER, PLC, supra note 22, at 24.
42 Id.
the utility’s IRP in a formal evidentiary hearing process at the SCC.\textsuperscript{43}

Since the Re-Regulation Act of 2007, there have been other forces driving Virginia’s clean energy movement. One of the significant initiatives is the 2018 Virginia Energy Plan required under Va. Code 67-201. Under the current energy plan, Governor Northman stated,

Virginia can shift to a more modern electric grid that is reliable, affordable, resilient, and environmentally responsible—and the Commonwealth can lead this critical industry as a result. This plan sets an ambitious path forward for Virginia, and I am confident we will charge ahead towards progress over the course of my administration.\textsuperscript{44}

Second, in 2018, the General Assembly passed HB 1558, which amended and reenacted several sections of the Code of Virginia and added section 56-585.1:4.\textsuperscript{45} The new section related to electric utility rates, grid modernization, energy efficiency, energy storage facilities, among other energy-related topics.\textsuperscript{46} The legislation was predicted to catapult Virginia out of an energy efficiency lag compared to other states by starting with investments over $1 billion in efficiency development.\textsuperscript{47} Also, the bill will encourage investment in cost-effective renewable energy development.\textsuperscript{48} Lastly, the bill allows Virginia to modernize its grid by incorporating technology that maximizes the use of renewables, battery storage, and demand response.\textsuperscript{49}

\begin{footnotes}
\footnotetext[43]{Id.}
\footnotetext[46]{Id.}
\footnotetext[47]{Id.}
\footnotetext[48]{Id.}
\footnotetext[49]{Id.}
\end{footnotes}
The bill further calls for Dominion to refund back to customers 200 million dollars in over-earnings.\textsuperscript{50} This act of legislation was a signal of a turning point and just the tip of the iceberg for Governor Northam’s most recent Executive Order. Arguably, Virginia’s energy regulation was broken and complicated. The past fostered a system of higher cost and increasing levels of pollution.\textsuperscript{51} But now utilities in Virginia are no longer greenlighted to build unnecessary and expensive power plants against the wishes of the people they serve.\textsuperscript{52} The law upends the outdated and old-fashioned business model and encourages clean energy, energy efficiency, environmental justice concepts, and modernizes the electrical grid.\textsuperscript{53}

Lastly, individual cities and counties in Virginia are driving the way for the state to implement renewables and meet their own clean energy goals.\textsuperscript{54} Localities like Arlington County have found that state policies have limited their options for purchasing renewable energy.\textsuperscript{55} This limitation has caused the counties closest to Washington D.C. to lose the opportunity to house large business offices in Northern Virginia, causing them to pull projects out of the state.\textsuperscript{56} These pullouts by major companies hurt Virginia’s economy in the long run. The issue resulted in the SCC ordering Dominion Energy to allow large customers, like Costco, Amazon, and Apple, to purchase renewable energy from outside competitive sources.\textsuperscript{57}

\textsuperscript{50} Id.
\textsuperscript{51} Id.
\textsuperscript{52} Id.
\textsuperscript{53} Id.
\textsuperscript{55} Id.
With many Virginians wanting cleaner sources of energy and leadership from the state, they have begun to pave the way for change, which is what we are starting to see with Dominion Energy.

**B. Current Efforts of Dominion and Public Response**

There are many driving factors currently for Virginia’s clean energy future, but it has not been an easy road getting there. There has been a complicated history between Dominion and organizations in the state regarding their practices. Even though they do not see eye to eye on each issue, they still come to the table to discuss today’s most pressing problem: climate change. One of the most significant oppositions Dominion faces by the public is their wield over the VA legislature.58 Another opposition by Virginians is that “Dominion makes money by exaggerating future energy demand, gaming the regulatory system, building unnecessary gas pipelines and power plants, and then charging customers for unneeded infrastructure.”59 In the coming years, it will be interesting to see how third parties will evaluate Dominion’s IRPs. Further, Dominion has a history of predatory rate hikes, accidents, environmental disasters, and insistence on investing in dirty fossil fuels like coal and gas.60

On the other hand, there have been significant changes and improvements that cloud people’s judgment on who and what to believe regarding Dominion Energy. For example, just this past year, Dominion Energy announced its decision to close ten coal and gas-fired plants in Virginia.61 Also, Dominion plans to launch four battery storage pilot projects in Virginia, which will help the utility assess storage technology it needs to support future renewable

60 Id.
generation and improve grid reliability. Lastly, Dominion invested 1.1 billion dollars in offshore wind with the hopes of developing 2,000 MW of offshore wind off Virginia’s coast and another 7.8 billion dollars to build a 2.6 GW offshore wind farm. On its face, it appears that Dominion Energy is making the conscious choice to move towards cleaner and more efficient energy. But the question is, why are these changes happening and why now?

There are three main reasons why we have seen these changes happening in the past several years. First, there has been a political shift and pressure from the state government onto Dominion energy. In 2017, the Democrats won big with the election of Governor Ralph Northam and in 2019 taking control of General assembly. These legislative seats led to a series of push backs on Dominion. Another critical political push back on Dominion was the SCC. This past year the SCC rejected Dominion’s IRP for the first

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65 See, Alan Suderman, *Dominion Bows to Pressure on Energy Efficiency Spending*, U.S. NEWS (Mar. 27, 2019), https://www.usnews.com/news/best-states/virginia/articles/2019-03-27/dominion-bows-to-pressure-on-energy-efficiency-spending (referencing how the 2017 election of Governor Northam and the legislative seats led to Dominion having invest in energy efficiency). See also Benjamin Storrow, *Va. Won’t cap CO2 with 9 other States – for now*, CLIMATE WIRE (May 3, 2019), https://www.eenews.net/stories/1060263689 (noting that Governor Northam’s ability to get RGGI through the legislature shows Virginia could be ready to join the coalition, meaning Dominion will either have to buy credits or build their own renewable generation).
time for both the state and the utility. The SCC stated that Dominion’s IRP forecasted “unrealistically high” energy demand and failed to model how electricity resources could lower the cost for customers. By rejecting Dominion’s IRP, this placed Dominion under a microscope with the SCC for current and future projects. Lastly, the Fourth Circuit Court of Appeals vacated Dominion’s permits for the Atlantic Coast pipeline, placing this highly contentious project at a standstill. Also, FERC ordered a stop on all construction for the Mountain Valley Pipeline.

Second, Dominion was facing the economic reality that clean energy is not only green for the planet but green in their pockets too. Utilities all over the country have read the writing on the wall that building new renewable energy generation is less expensive than running old coal plants. On average, new wind costs fifteen dollars per MW, and new solar costs twenty eight dollars per MW, which is lower than the combined price of operating, maintenance, and fuel cost for existing coal-fired power plants. By 2025, to operate, maintain, and fuel an existing coal-fired plant will be twenty five percent higher than to build a new wind or solar facility. Facing this reality, Dominion has already closed ten coal

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67 Id.
69 See Sarah Vogelsong, *Federal Commission Order Work Stopped on Mountain Valley Pipeline*, VIRGINIA MERCURY, Oct. 16, 2019 (referencing that FERC ordered all work on the Mountain Valley Pipeline to halt work under the endangered species act).
71 Id.
plants in the state and is looking to close more with the latest renewable generation they have proposed.\textsuperscript{73} Also, bordering states, like North Carolina, have already pledged to go 100 percent carbon-free energy by 2050.\textsuperscript{74} Lastly, there is a high potential to create clean energy jobs in the commonwealth, which would create sustainable economic growth in areas such as Hampton, VA.\textsuperscript{75} According to reports, the offshore wind industry could bring between 10,000 to 14,000 new well-paying jobs in low-income communities in Hampton, Virginia.\textsuperscript{76}

Lastly, there have been social changes in the state that have driven both state governments and utilities to start taking action against climate change. There have been two significant components to this action. First, there has been pressure from environmental groups, customer advocate groups, and customers of Dominion concerning their rates and environmental practices.\textsuperscript{77} Second, there has been an increasing awareness of rate disparities between low-income families and mid to higher-income families.\textsuperscript{78} All three of these issues have led to the tipping point for Virginians and resulted in Governor Northam’s Executive Order 43 this past September.

\begin{itemize}
    \item \textsuperscript{73} Walton, \textit{supra} note 61.
    \item \textsuperscript{75} DAVID OGLETHORPE, \textsc{Our Common Agenda: 2020 Environmental Briefing Book} (2019).
    \item \textsuperscript{76} \textit{Id.}
    \item \textsuperscript{77} See Sierra Club v. Va. Elec. & Power Co., 903 F.3d 403 (2018) (holding that the coal company did not violate the Clean Water Act because the contamination from rainwater seeping through coal ash piles and ponds was not a discharge within the meaning of the statute since it did not come from a point source); \textit{See also} Precision Pipeline, LLC v. Dominion Transmission, 2018 U.S. Dist. LEXIS 133202 (E.D. Va. Aug. 7, 2018) (referencing how Dominion faced legal challenges for their 55-mile natural gas pipeline through Pennsylvania and West Virginia).
    \item \textsuperscript{78} OGLETHORPE, \textit{supra} note 75, at 64 (quoting how low-income residents spend a greater percentage of their income on utility bills and will be disproportionately affected if Virginia’s Energy Transition Results in Near-term bill impacts).\
\end{itemize}
II. EXECUTIVE ORDER 43 IN RELATION TO CURRENT VIRGINIA LAW.

A. What Does Executive Order 43 Actually Say?

On Monday, September 16, 2019, Governor Northam issued Executive Order 43 that caused a wave of excitement throughout the state—from environmentalists, politicians, energy enthusiasts, and your everyday Virginian—that Virginia’s Governor is taking the initiative to combat climate change in Virginia.79 But where does Governor Northam get the authority to authorize executive orders, what does the order actually say, and mean for Virginia’s energy future?

Under the Constitution of Virginia Article V and the laws of the Commonwealth, Governor Northam has the authority to issue executive orders.80 A Governor may use executive orders to accomplish a variety of tasks, including administrative issues, regulatory reform, environmental impact, and intergovernmental coordination.81 Executive Order 43 “Expanding Access to Clean Energy and Growing the Clean Energy Jobs of the Future” directs several state agencies to develop a plan of action to meet the order,82

Department of Mines, Mineral 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), to 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 2050.83

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80 VA. CONST. OF 1776, art. V, § 6 (1994).
82 Executive Order 43, supra note 17, at 3.
83 Id.
The language used in the central executive action above is purposeful and holds powerful meaning for what the order is saying. Although on its face, the order suggests that Virginia is moving towards clean energy and a sustainable future, the opposite could easily happen. The language used provides a loophole for utilities and regulators. In the first clause, the order uses “renewable energy,” and nowhere in the order is renewable energy defined, or is there a directive that directs the legislature or state agencies to look at the definition of renewable energy to exclude carbon-intensive and highly-polluting renewable sources.84 Currently, Virginia generates 6.8 percent of its electricity from renewables, which include burning highly polluting biomass and landfill gas under Virginia law.85

The second clause of the order states that one hundred percent of Virginia’s electricity will be supplied from “carbon-free” sources by 2050, which is also not defined in the order.86 The term “carbon-free” is a clear approval for nuclear energy.87 Allowing Dominion to keep its four nuclear reactors in service past 2050 even though they may not be operational, economic, or wise.88 Also, this goal goes beyond Dominion’s corporate goal of eighty percent carbon-free by 2050.89 The language chosen by the Governor and his team was methodical and deliberate to leave the door open for carbon-producing renewables and nuclear energy in the mix.

84 Id.
85 Morehouse, supra note 79.
86 Executive Order 43, supra note 17.
89 Id.; see also Delivering Clean Energy, DOMINION ENERGY, https://www.dominionenergy.com/ourpromise/clean-energy (providing information regarding its corporate goals).
The order has five objectives within it: (1) Solar and Onshore Wind Energy; (2) Energy Efficiency; (3) Offshore Wind; (4) Energy Storage; and (5) Energy Equity. First, for solar and onshore wind, Virginia has a statewide goal of achieving 5,500 MW of wind and solar by 2028. The order calls for at least 3,000 MW of this target to be under development by 2022. Lastly, the order calls on Dominion’s commitments to annually procure up to 500 MW of utility-scale solar and onshore wind projects and for Dominion to annually procure smaller-scale solar energy starting at fifty MW and scaling up to 150 MW. The order leaves out an essential tool for clean energy policies, customer solar or distributed generation. Distributive generation is a significant policy tool when it comes to de-carbonizing the electric grid while also making it more reliable, sustainable, and affordable for its customers.

Second, the order tackles energy efficiency goals for the agencies to consider in their plan. The order directs regulators to reduce Virginia’s electricity consumption by ten percent below 2006 levels. The reductions are to come from building codes, energy performance contracting, private financing programs, and investments from the Commonwealth’s utilities. Currently, under Senate Bill 966, Dominion Energy is to invest $870 million in energy efficiency programs over the next decade. The order directs

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90 Executive Order 43, supra note 17, at 3–4.
91 Id. at 3; VA. CODE. ANN. § 56-585.2 (2018) (governing the sale of electricity from renewable sources through a renewable energy portfolio standard program, currently Virginia is a voluntary RPS).
92 Executive Order 43, supra note 17.
93 Id.
94 When connected to the electric utility’s lower voltage distribution lines, distributed generation can help support delivery of clean, reliable power to additional customers and reduce electricity losses along transmission and distribution lines. See Distributed Generation of Electricity and its Environmental Impacts EPA (2018), https://www.epa.gov/energy/distributed-generation-electricity-and-its-environmental-impacts (defining distributive generation, which refers to a variety of technologies that generate electricity at or near where it will be used, such as solar panels and combined heat and power).
95 Id.
96 Executive Order 43, supra note 17.
97 Id. at 4.
DMME to provide recommendations to support the implementation of increased utility investment in energy efficiency programs.\footnote{Id.}

Third, the order directs Dominion to take advantage of Virginia’s full offshore wind potential of 2,500 MW.\footnote{Id.} Virginia currently has a 12MW demonstration project under construction.\footnote{Id.} The order calls for the area to be fully developed by 2026, and the plan proposed by DMME should include a timeline and steps needed to achieve this target.\footnote{Id.} In the days after the order, Dominion updated its offshore wind plan to build three wind farms, a total of 220 turbines with a capacity of 2,600 MW to be in service by 2026.\footnote{Walton, supra note 63.}

Fourth, the order calls for energy storage with the increasing integration of more renewable energy and to balance the intermittency of the grid to be increasingly important.\footnote{Executive Order 43, supra note 17, at 4.} Already, SB 966 requires Dominion Energy to Develop a thirty MW battery storage pilot program.\footnote{2018 VA. ACTS SB 966: Grid Transformation & Security Act.} The order directs the DMME that part of their plan should also include pumped hydroelectric storage facilities because they are now in the public interest.\footnote{Id.}

Lastly, the order directs agencies to address issues related to equity and environmental justice.\footnote{Id.} Governor Northam’s purpose for including this section is to ensure that the clean energy and climate goals outlined in his order are achieved while also advancing social, energy, and environmental equity for Virginians.\footnote{Id.} The directive calls for the plan to include measures that provide communities of color and low- and moderate-income communities access to clean energy and also reducing their energy burdens.\footnote{Id. (this type of category in the order is very unique, especially in Virginia because of their conservative history).}
The DMME is to submit the plan to the Governor on July 1, 2020. What in the plan is enforceable today, and what needs further legislative or regulatory action? In the first section of the order, discussed above, there is nothing that has any immediate legal effects, but orders a planning process to commence and be completed by July 1, 2020. The DMME and other agencies are to construct this plan with the goals the Governor laid out in his order are binding. The objectives within this section will need new legislation for them to start taking shape or to have an effect, which will have to wait until the 2021 legislative session. Legislation related to this order cannot be proposed or voted on in 2020 related because the plan is due after the legislative session in January and February of 2020; therefore, this can slow down the momentum for legislation in 2021. Also, it leaves the Governor’s goals and plans open to the risk of who will be his successor and what their objectives are in 2022.

On the other hand, the second part of the Governor’s order has an immediate legal effect, even though it is limited; it is still a significant accomplishment for the order. The second part states that the “Commonwealth shall procure at least thirty percent of their electricity from Dominion Energy’s renewable energy sources by 2022.” Therefore this statement established a new target for state procurement of solar and wind energy of thirty percent of their electricity by 2022, which up from an eight percent goal set by former Governor Terry McAuliffe. Also, the order calls for at least ten MW of cumulative distributed solar at state facilities annually, starting the fall of 2019 through power purchase agreements (PPA).

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109 Main, supra note 88.
110 Id.
111 Executive Order 43, supra note 17.
112 Id. at 5.
113 Main, supra note 88.
114 Executive Order 43, supra note 17. See also Power Purchase Agreements (PPAs) and Energy Purchase Agreements (EPAs), WORLD BANK GROUP, https://ppp.worldbank.org/public-private-partnership/sector/energy/energy-power-agreements/power-purchase-agreements (defining that a PPA is a type of contract that secures the payment stream for a build-own transfer or concession project for an independent power plant. It is between the purchaser “offtaker” and a privately-owned power producer).
Lastly, this section calls for agencies to consider distributed solar as part of all new construction during the design and engineering process for new buildings.\textsuperscript{115}

In the third section of the order, Governor Northam requires that state facilities shall reduce electricity consumption across all of the Commonwealth’s agencies and institutions by ten percent by 2022.\textsuperscript{116} This reduction will be made through energy performance contracting for both existing and new buildings.\textsuperscript{117} The significance of this section is that it is accomplishing the energy efficiency goal set out for the entire state but accomplishes it at the government level eight years faster, and with no loopholes.

Overall, Governor Northam’s Executive Order 43 creates lofty goals, but only sets two legally binding standards today. The primary goals of the order will not even see the light of day until July 2020 when the DMME submits their plan to the Governor during his second to last year in office. The goals in sections two and three are legally binding, but the ones in section one requires legislative action.

**B. What Is Currently Virginia Law?**

There are three current laws, policies, or regulations in Virginia that this executive order play on or overlaps. First, the Virginia Department of Environmental Quality (“DEQ”) promulgated a carbon rule to regulate carbon dioxide from the power sector. Second, Title 67 of the Virginia Code, which is the Virginia Energy Plan and recently updated in 2018. Lastly, Senate Bill 966 (“SB 966”) or also known as the Grid Transformation and Security Act, passed in 2018. These three major policies or regulations have been the driving forces behind Executive Order 43 and have strikingly similar attributes to Executive Order 43.

\textsuperscript{115} Executive Order 43, \textit{supra} note 17.
\textsuperscript{116} Id.
\textsuperscript{117} Id.
First, the DEQ Carbon Rule was passed in the Spring of 2018 to limit Carbon Pollution and fight climate change.\textsuperscript{118} The rule is supposed to reduce power plant CO\textsubscript{2} emissions by thirty percent by 2030.\textsuperscript{119} The rule sets the cap for CO\textsubscript{2} at 28 million tons of CO\textsubscript{2} for large fossil fuel-fired electric power generating facilities making Virginia the twelfth state in the nation and the first southern state to regulate carbon pollution.\textsuperscript{120} This rule has been in the works for the past two years and subsequent to former Governor McAuliffe’s Executive Directive 11.\textsuperscript{121} Also, this rule makes Virginia take the steps necessary to join the Regional Greenhouse Gas Initiative (“RGGI”) after being vetoed by Governor Northam this past legislative session.\textsuperscript{122} But before its adoption, the General Assembly added language to the 2018–2020 biennial budget prohibiting Virginia’s membership or participation in RGGI until the General Assembly decides otherwise.\textsuperscript{123} The rule requires participation in RGGI; therefore, the prohibited funding effectively halts the implementation of the rule.\textsuperscript{124} Also, Governor Northam signed the budget bill despite pressure from environmental groups to veto it and not exercise his line-item veto power.\textsuperscript{125} DEQ, in the final rule adopted

\begin{footnotes}
\footnotetext[119]{Id.}
\footnotetext[120]{Id.}
\footnotetext[121]{Robert Walton, Virginia Gov. McAuliffe Order Carbon Pollution Rules for Power Sector, UTILITY DIVE (May 17, 2017), https://www.utilitydive.com/news/virginia-gov-mcauliffe-orders-carbon-pollution-rules-for-power-sector/442899/ (generally explaining Governor McAuliffe’s Executive Order 11, which instructs the Department of Environmental Quality to begin the process of establishing regulation to reduce carbon emissions from power plants).}
\footnotetext[124]{Id.}
\footnotetext[125]{Id.}
\end{footnotes}
the text of the proposed rule, except they made a revision and an addition to it without providing proper notice to the public and could make the rule void.\footnote{Id.} This may explain why the goals in the executive order and carbon rule are strikingly similar. Overall, the rule ensures that Virginia is “trading-ready” to allow for the use of market-based mechanisms and the exchange of CO\textsubscript{2} allowances through a multi-state carbon market.\footnote{Bilyeu, supra note 118.}

Second, Title 67 of the Virginia Code or also known as the Virginia Energy Plan of 2018, provides both a status update on Virginia’s current energy system and a set of recommendations that are both forward-looking and adaptive to enable the energy transformations that are underway.\footnote{VA. CODE ANN. Ch. 2, § 67-201 (2009). See also OFFICE OF THE SEC’Y OF COMMERCE & TRADE: DEP’T OF MINES, MINERALS & ENERGY, THE COMMONWEALTH OF VIRGINIA’S 2018 ENERGY PLAN (2018) [hereinafter Energy Plan 2018].} The energy plan is developed by the Governor and the DMME every four years.\footnote{Id.} The energy plan provides both high-level and detailed recommendations to enable grid modernization to occur in a forward-looking, dynamic, and flexible manner.\footnote{Energy Plan 2018, supra note 128.} The plan includes five specific policy recommendations: (1) Solar and Onshore wind; (2) Offshore wind; (3) Energy Efficiency; (4) Energy Storage; and (5) Electric Vehicles and Advanced Transportation.\footnote{Id.} For solar and onshore wind, the recommendations include the achievement of at least 3,000 MW of the 5,000 MW of solar and wind resources deemed in the public interest under Senate Bill 966.\footnote{Id.} The energy plan also includes the recommendation to double the Commonwealth’s renewable energy procurement target to sixteen percent by 2022.\footnote{Id. (referencing how Governor Northam raised the goal from 16% to 30% in his executive order).} The recommendations for offshore wind
includes establishing a goal of 2,000 MW of offshore wind potential in Virginia’s wind energy areas to be developed by 2028.\textsuperscript{134}

Next, the recommendations for energy efficiency is to apply Virginia’s established energy conservation goal as well as potential avenues to deploy additional energy efficiency programs.\textsuperscript{135} These recommendations include increased utility-funding for energy efficiency programs at an increase of $100 million a year and amounts outlined in SB 966.\textsuperscript{136} The recommendations for energy storage focus on the resource as an emerging technology that could dramatically impact the grid of the future.\textsuperscript{137} The energy plan also recommends increased collaboration with the use of these technologies.\textsuperscript{138}

Lastly, the energy plan recommendation for electric vehicles and advanced transportation is to recognize that shifts in the transportation sector will impact the energy sector, including the electrical grid.\textsuperscript{139} The recommendation includes the adoption of an Advanced Clean Cars program, developing a comprehensive electric vehicle transportation plan, and setting targets for both electric vehicle charging infrastructure and the Commonwealth’s vehicle fleet.\textsuperscript{140} Overall, the 2018 Energy Plan is a comprehensive plan for Virginia that advises along with the same topics and goals as Governor Northam’s order.\textsuperscript{141}

Lastly, the Grid Transformation and Security Act of 2018 provides essential mechanisms to modernize our electric grid. Senate Bill 966: Electric Utility regulation; grid modernization, energy efficiency was introduced by Senator Frank W. Wagner during the 2018 Legislative Session and was passed into law. Among other things, the legislation includes language providing the following actions: (1) 5,000 MW of utility-owned and utility-operated

\textsuperscript{134} Id.
\textsuperscript{135} Id.
\textsuperscript{136} Id.
\textsuperscript{137} Id.
\textsuperscript{138} Id.
\textsuperscript{139} Id.
\textsuperscript{140} Id.
wind and solar resources deemed in the public interest; (2) 500 MW of rooftop solar resources that are less than 1 MW in size deemed in the public interest; (3) $1.1 billion investment in energy efficiency programs by investor-owned utilities; and (4) cost recovery structures for projects that modernize the grid and support the integration of distributed energy resources. SB 966 also directs the SCC to conduct pilot programs for the deployment of electric power storage batteries with capacity limits up to 30 MW for Dominion Energy. The legislation required APCo and Dominion to develop programs of energy conservation measures costing no less than $870 million. Overall, SB 966 got the steam ball rolling for Virginia to start modernizing the grid and to incorporate renewable and clean energy, which has led to other executive efforts and this order to try and implement its goals.

C. What Are the Overlaps and Uncertainties Between the Executive Order and Current Law?

At first glance, the executive order was exciting for many reasons, but when it comes down to the details, it is more of the same old and mostly repeats advisory goals established the prior year. Between the three laws and policies addressed above and with the executive order, there are significant overlaps of ideas and goals for Virginia energy.

First, DEQ’s carbon rule and the executive order have strikingly similar targets or goals. There seems to be a reasonable explanation for why the two are almost the same. First, it could mean that Governor Northam does not believe the Carbon Rule will be implemented due to the budget bill, and this way, he can ensure a thirty percent decrease in carbon emissions by having the state powered by thirty percent renewable energy by 2030. Or it could mean that if the rule goes into effect that Governor Northam wanted to add an extra buffer against Dominion, who opposed the Carbon Rule. Dominion opposed the current carbon rule because they


\[143\] Id.

\[144\] Id.
believed that by requiring lower in-state carbon emission it would force them to reduce their coal and gas output in Virginia and buy renewable power out of state.\footnote{Main, \textit{supra} note 88.} To avoid buying power out of the state, Dominion would have to build new renewable generation facilities or participate in RGGI trading, making it more expensive for ratepayers, in their opinion.\footnote{\textit{Id.}} When Governor Northam set the goal of thirty percent of power generation from renewables he attempted to not only resolve the carbon rule dilemma but also lower carbon emissions beyond DEQ’s thirty percent target.\footnote{Id.}

Second, the energy plan developed by the Governor and the DMME in 2022 will most likely be very similar to prior policies, regulations, and prior energy plans. The order itself largely recites the existing goals and works in progress by both the DMME and DEQ in the past year. The overlaps between the order and the Energy Plan developed by DMME include: (1) Ensure that utilities meet their existing commitments to solar and onshore wind energy developments including recommending legislation to reduce barriers to achieving these goals, and 500 MW of utility-owned wind or solar; (2) To ensure that Virginia’s offshore wind energy is fully developed with as much as 2,500 MW of offshore by 2026; (3) Increase utility investment in energy efficiency, beyond what is provided in SB 966; and (4) The integration of storage technologies into the grid and pairing them with renewable generation.\footnote{Main, \textit{supra} note 88; 67 VA. CODE ANN. §§ 67-201; 2018 Va. Acts SB 966; 36 Va. Reg. Regs. 351.} But there is one sharp difference between the order and the energy plan. The order calls for environmental justice, and equity in the planning process, including “measures that provide communities of color and low- and moderate-income communities access to clean energy and a reduction in their energy burdens.”\footnote{36 Va. Reg. Regs. 351.} Whereas the energy plan

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\footnote{Main, \textit{supra} note 88.}
calls for transportation and advances transportation action because the sectors will ultimately affect one another.\footnote{\textit{VA. CODE.} § 67-201.} Transportation is vital to a state’s energy plan because the addition of electric vehicles will affect the grid. The issue of clean energy justice is equally important to energy policy and ensuring that everyone has the right and access to clean and affordable energy. To achieve both the goals outlines in the Executive Order and in the Energy Plan electric vehicles and transportation are key to reducing GHGs in the energy and transportation sectors.

Third, SB 966 and Governor Northam’s executive order also have significant overlap. The executive order mainly recaps the goals outlined in SB 966. The first section of the executive order discusses the solar and onshore wind energy goal of achieving 5,500 MW of energy by 2028.\footnote{\textit{36 Va. Reg. Regs. 351.}} Another repeat of SB 966 in the order is that Dominion is committed to annually procure up to 500 MW of utility-scale solar and onshore wind through a competitive procurement process.\footnote{\textit{Id.}} In energy efficiency, the order again takes the goals of SB 966 that Dominion Energy will invest $870 million in energy efficiency programs over the next decade.\footnote{\textit{Id.}} But the order does increase the amount of spending that Dominion should spend per year by $100 million.\footnote{\textit{Id.}} Lastly, in the energy storage portion of the order, Governor Northam reaffirms that Dominion Energy is to develop a thirty MW battery storage pilot program.\footnote{\textit{COMMONWEALTH OF VA., EXECUTIVE ORDER NO. 43 (2019).}} Governor Northam’s order largely recites and re-affirms the goals set forth under SB 966, ensuring that Dominion will take action.

Lastly, it is essential to note that the order does not touch on natural gas or the two natural gas pipelines that are currently proposed, built, and opposed in Virginia. The order itself has no mention of any fossil fuel infrastructure while shutting down coal and gas plants is the quickest and easiest way to reduce CO\textsubscript{2} from the electric sector. The big question is what that means for the

\footnote{\textit{67. VA. CODE.} § 67-201.}
\footnote{\textit{36 Va. Reg. Regs. 351.}}
\footnote{\textit{Id.}}
\footnote{\textit{Id.}}
\footnote{\textit{COMMONWEALTH OF VA., EXECUTIVE ORDER NO. 43 (2019).}}
\footnote{\textit{Id.; 2018 VA. ACTS 966.}}
Mountain Valley and Atlantic Coast pipelines, even though they have been facing sharp scrutiny in the court system. Duke Energy, a member of the pipeline system, recently pledged zero carbon by 2050 as well. Therefore, if Dominion and Duke Energy join each other in this pledge, the state’s use of natural gas must go down and not up. Meaning there is no need for the pipeline, and the cost should not be passed to the ratepayers because it is not used and useful to them.

Overall, Governor Northam’s order largely recites already established law and regulations set forth by DEQ’s Carbon Rule, the 2018 Energy Plan, and SB 966. The first section of the order is not legally binding and requires legislative action in 2021, while parts two and three set new legally binding standards for agencies and departments in the Commonwealth. Lastly, the word choice used by Governor Northam for the overall goals of Virginia was to intend to keep dirty renewables in the mix and to ensure that Dominion’s nuclear plants will be able to run to and past 2050. Therefore, the Governor’s executive order is no more than a good public relations


158 Methane is the other important greenhouse gas and is the primary component of natural gas. It is important to address methane as carbon dioxide because methane is 84 times more potent than carbon dioxide. Both types of emissions must be addressed if we want to effectively reduce the impact of climate change. See Methane: The Other Important Greenhouse Gas, ENVIRONMENTAL DEFENSE FUND, https://www.edf.org/climate/methane-other-important-greenhouse-gas.

159 James J. Hoecker, Used and Useful: Autopsy of A Ratemaking Policy, ENERGY L.J. 303 (1987) (referencing used, and useful principle is and its value in the rate-making process).
stunt and possibly a nod to Dominion that the status quo can continue.

III. THE CURRENT GAPS IN VIRGINIA LAW THAT ARE PREVENTING CLEAN ENERGY

A. Prior Administration, the Current Administration, and the Legislature

While there has been a push for renewable and clean energy policies in Virginia for the past six years, there are still significant gaps within our laws and regulations that are preventing renewable and clean energy development. Virginia is known to be historically conservative when it comes to environmental and other social policies, so when former Governor McAuliffe took office in 2014, there had to be a gradual but steady shift in his energy policies to start making changes. Now, with current Governor Northam leading the way, these policies have begun to take hold, but there is still a long way to go for Virginians.

When a new Governor comes into office in Virginia, they are to meet with DMME to create and write their Energy Plan for their term as governor. The energy plan serves as a way for the current Governor to lay out their principles and platform for action, but not the action itself. In 2014, Governor McAuliffe released his plan that included an “all of the above” approach. Although it was more of the same, there were more solar energy, offshore wind, and energy efficiency goals than before—and less about coal. But McAul-

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160 Va. Code. Ch. 2, § 67-201 (citing that Va. Code requires the plan to be rewritten every four years, the plan does not have the force of law behind it. It is intended to lay out principles, to be the Governor’s platform and a basis for action, not the actual action itself).
161 Id.
iffe’s energy plan had a little something for everyone. For renewable energy, the governor called for four significant items; (1) a raise on the cap for customer-owned solar and other renewables from one percent of a utility’s peak load to three percent; (2) allowing neighborhoods and office parks to develop and secure renewable energy projects; (3) allowing third-party power purchase agreements statewide; and (4) increasing the size limits on both residential and commercial net-metered projects to forty kW and one MW respectfully.\(^{164}\) With the offshore wind, the Governor reiterates his enthusiasm for offshore wind but did not say much about how or when it would happen.\(^{165}\) Lastly, there was no mention of having a mandatory Renewable Portfolio Standard (RPS), which the governor used heavily in his campaign when running for office.\(^{166}\)

In McAuliffe’s energy plan, he also speaks about energy efficiency, natural gas, nuclear energy, coal, and offshore drilling. First, the energy plan calls for establishing a Virginia Board of Energy Efficiency, whose task is to determine the state goal of reducing energy consumption by ten percent.\(^{167}\) Second, the governor endorsed a 500-mile long natural gas pipeline from West Virginia to North Carolina, which is now known as the Mountain-Valley Gas Pipeline.\(^{168}\) Third, the plan makes no mention of coal and how it has fallen on hard times, which is a win for environmental groups.\(^{169}\) Fourth, the governor called for Virginia to be a national and global leader in nuclear energy, allowing Dominion to keep investing in new and old nuclear reactors.\(^{170}\) Lastly, the governor states in his energy plan that we should “fully support” offshore drilling and be

\(^{164}\) Id.
\(^{165}\) Id.
\(^{166}\) Id. (speaking about how this was one of McAuliffe major campaign platforms); see also VA. CODE. ANN. § 65-585.2. Sale of electricity from renewable sources through a renewable energy portfolio standard program. (currently Virginia is a voluntary RPS).
\(^{167}\) Update to 2014 Energy Plan, supra note 162.
\(^{168}\) Id.
\(^{169}\) Id.
\(^{170}\) Id.
able to provide a timely and comprehensive response to any spills that could happen.\footnote{171 Id.}

Overall, Governor McAuliffe’s energy plan was a way to reach both sides of the aisle with the Virginia State legislature. It was a win for renewable energy, but also some significant losses with natural gas and offshore drilling. Luckily for Virginians, the energy plan is only a platform for action and requires legislative action. On the other hand, Governor Northam’s energy plan is a shift to Virginia’s energy policy compared to his predecessor.

The 2018 energy plan, which is discussed in an earlier section, is all about energy efficiency, solar, onshore and offshore wind, clean transportation, and reducing carbon emissions.\footnote{172 VA. CODE. Ch. 2, § 67-201.} Governor Northam’s proposals in his energy plan would begin to move Virginia away from their fossil fuel past and into a new future of renewable and clean energy. Some of the highlights of his plan include calling for 2,000 MW of offshore wind by 2028.\footnote{173 Id.} Another highlight was the Governor’s push for electric vehicles, which is missing in his executive order.\footnote{174 Id.; Executive Order 43, supra note 17.} The plan reinforces the ten percent energy efficiency reduction goal and also gives a nod to SB 966. Lastly, in Governor Northam’s energy plan, he recommends increasing the cap on solar from one percent to five percent, which was previously three percent by the former governor.\footnote{175 67. VA. CODE. Ch. 2, § 67-201 (2014).}

Overall, the plans are just plans, and there is little to no action guaranteed from them. They try to appeal to both sides of the aisle to avoid legislative blocks. This past November, the blue wave hit Virginia and flipped both the house and senate to be under Democrat control,\footnote{176 Ryan W. Miller, \textit{Virginia Is Officially Blue. Democrats Regain Control of Legislature, Clearing Way for Liberal Policies}, USA TODAY, Nov. 6, 2019.} meaning that Governor Northam has full control of the government for the first time in twenty six years.\footnote{177 Id.}
In the past, the state legislature has been a significant roadblock for Virginians to receive renewable and clean energy policies that will benefit them. In the 2019 legislative session, legislators were presented with dozens of bills designed to save customers money, lower energy consumption, provide solar options. They set up a path to a renewable future, but almost none of these bills passed, while bills that benefited utilizes did. If the legislation passed these bills, the executive order may not have happened because Virginia would be in a very different energy direction. For example, Virginians could have looked forward to a freer and more open market for renewable energy, a mandate for utilities to achieve real energy efficiency results, the right to choose an electricity supplier for renewable energy, receive tax credits for solar, rebates for low and moderate-income Virginians who install solar, and a new revenue source for spending on climate adaptation efforts from joining RGGI. These policies and opportunities were taken from Virginians because of the state legislature, and the utility influence over them. Meaning that this past state election was even more critical not only for Governor Northam’s order but for Virginians as well since regulation and laws related to the order cannot happen until 2021. The road to change has come to a fork in the road but Virginians made it clear to what direction they want to go by flipping both the House and the Senate blue this past November.

B. Barriers to Effective Energy Efficiency

Virginia has an energy efficiency problem, and several barriers prevent Virginia from deploying energy efficiency fully. Energy efficiency is achieving the same output with less energy

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179 Id.

180 OGLETHORPE, supra note 75, at 52.
generated to do the same amount of work.\textsuperscript{181} Studies have shown that Virginia has the economic potential to cut electricity use by 18.7 percent by 2035, but has captured only two percent of this potential, and ranks forty eighth among the fifty states in this area.\textsuperscript{182} Despite recent legislation requiring Virginia’s two largest utilities to spend more money on energy efficiency over the next ten years, Virginian’s energy efficiency efforts will remain far behind most other states.\textsuperscript{183} The unnecessary use and pollution from energy harm Virginians across the board, from their wallets to their health.\textsuperscript{184} If the electric utilities invested in saving energy, it would create jobs, free-up money to be spent elsewhere in the economy, and improve people’s health.\textsuperscript{185}

The barriers for Virginia to reach a fully effective energy efficiency program are housed in our current legislation because they fail to incentivize or require energy efficiency investments. These investments include existing utility profit incentives, which favor building new facilities and paying affiliates for fuel and pipeline services when they are not necessary to meet Virginia’s energy demand, rather than reducing customer’s energy use. Possible legislation is to develop new revenue incentives to minimize customer cost, performance-based regulations rather than traditional regulations, such as a rate-of-return.\textsuperscript{186} Performance-based regulation rewards the utility based on its achievement of specific performance measurements, which could allow utilities to earn a higher rate-of-return from meeting specific performance standards rather than traditional regulation.\textsuperscript{187} Some areas where a utility can achieve

\textsuperscript{182} OGLETHORPE, supra note 75, at 52.
\textsuperscript{183} Id. Grid Transformation & Security Act. Va. Code Ann SB 966 (2018), (requiring more utility spending on energy efficiency; but unlike many other states, Virginia still does not have an Energy Efficiency Resource standard that requires any specific, demand-reduction results).
\textsuperscript{185} Id.
\textsuperscript{186} Sonia Aggarwal & Hal Harvey, Rethinking Policy to Deliver a Clean Energy Future, 26 ELECTRICITY J. 7 (2013).
\textsuperscript{187} Id.
specific measurements are reduced energy cost and additional renewable generation. This type of regulation also encourages utilities to be in a market system or to call on third-party providers rather than being vertically integrated.

Another barrier is the weak building code permits for construction, which are leaving buyers and renters bearing higher energy costs. Without stronger building codes, heat and cold air are escaping buildings resulting in people having to use more energy to stay warm in the winter and cooler in the summers. Also, Virginia’s “Dillon Rule” prevents local governments from requiring greater energy efficiency in buildings or appliances or requiring benchmarking within their jurisdictions, forcing them to follow state policies. Lastly, government entities often avoid near-term costs of efficiency improvements at the expense of higher future costs to taxpayers. Currently, Virginia law allows for utilities to recover “lost revenues” and does not promote energy efficiency to achieve the goals outlined in Governor Northam’s executive order or energy plan legislative action is critical in 2020.

C. Barriers to Solar Energy Development

Local governments, residents, and businesses are all aiming to do their part in the fight against climate change, and one of the easiest ways for them to reduce their impact is by installing solar on their buildings or homes. But local governments, residents, and

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188 Id.
189 Id.
190 OGLETHORPE, supra note 75, at 64.
191 Id.; see also LOCAL GOVERNMENT IN VIRGINIA, http://578125292684560794.weebly.com/dillons-rule.html (referencing the Dillion rule provides that local governing bodies have only those powers that are expressly granted, those that are necessarily or fairly implied from expressly granted powers and those that are essential and indispensable).
192 William Penniman, Investing in Virginia’s Energy Efficiency, VIRGINIA CONSERVATION NETWORK, http://www.vcnva.org/investing-in-virginias-energy-efficiency/ (referencing that current Virginia law currently allows the utilities to recover “lost revenues,” i.e., the money the utility would have made if it have sold the energy that the efficiency program avoided in the first place).
businesses in Virginia have a tougher time installing solar because current Virginia law places barriers on for small-scale, customer-sited, “distributed” solar projects, which hold back communities from investing in the clean energy they want.\textsuperscript{193} One of the most restrictive barriers is the cap of distributed solar with PPAs.\textsuperscript{194} Currently, the solar industry has asked the SCC to raise the program cap from fifty MW to 500 MW in Dominion territory.\textsuperscript{195} This cap disincentives developers to produce projects because they are not financially feasible once they reach the cap.\textsuperscript{196}

Net metering policies encourage distributed, which allows customers to consume the energy their solar panels produce. If the panels produce more than what the customer needs, the excess energy rolls over as a credit against electricity used when the sun isn’t shining.\textsuperscript{197} Customers only pay the utility for the energy they consumed at the end of the month if their consumption exceeds the credits they earned.\textsuperscript{198} Also, in many states, customers who have solar panels will pay a monthly fixed fee for transmission and distribution for the operation and maintenance of the grid.\textsuperscript{199}

Distributed generation disrupts the traditional utility business model because they relied on a one-way grid, where now electricity can be produced where it is needed saving customers money.\textsuperscript{200} Net metering has been critical for the growth of the solar industry not


\textsuperscript{194} Id. (Virginia law currently places an overall limit of 50 MW on projects installed in Dominion territory using third-party power purchase agreements, the primary financing mechanism for tax-exempt entities. Virginia remains well behind North Carolina and Maryland on solar installations, solely for reasons of state policy).

\textsuperscript{195} Id.

\textsuperscript{196} Id.


\textsuperscript{198} Id.

\textsuperscript{199} Id.

\textsuperscript{200} Id.
only in Virginia but in most other states. Right now, Virginia law creates barriers for Virginians to receive the benefits of customer-owned solar. Virginia offers no tax credits, rebates, or mandatory renewable portfolio standards to support a market for solar renewable energy certificates, and many customers cannot afford the up-front costs of solar.201

Virginia law also imposes massive limitations, conditions, and penalties on the solar industry and customers, adding up to millions of dollars in lost revenue for Virginia.202 These barriers include a limit on the total amount of net-metered solar allowed in Virginia.203 For example, Virginia law prohibits local governments from using electricity produced on-site to serve other buildings off-site.204 Barriers to residents include added fees that act as a tax on large residential solar facilities, using a single solar facility to serve an apartment or a multi-family dwelling and a requirement for customers in an investor-owned utility territory that the total capacity of the panel cannot be larger than last year’s demand.205 Lastly, barriers to business include a project size cap for net-metered solar facilities, barriers to using a single facility to serve two or more meters, and a barrier preventing a building owner from selling the output of a solar array to tenants.206

While there has been some movement to remove these barriers, the General Assembly has proven time and again to support utility-scaled and owned solar facilities rather than customer-owned, which is another theme that emerged in Governor Northam’s executive order.

201 OGLETHORPE, supra note 75, at 52; VA. CODE. ANN. Title 56 (dealing with Public Service Companies and Chapter 23 the Virginia Electric Utility Regulation Act, which encompasses current renewable, clean, and efficient energy regulations).

202 OGLETHORPE, supra note 75, at 56.

203 Id.; VA. CODE. ANN. Title 56, § 56-585.4. Net energy metering transition provisions for electric cooperatives (referencing caps on distributive solar).

204 Id.

205 Id.

206 Id.
D. Virginia’s Grid Transformation

In 2018, the General Assembly passed SB 966, discussed in a previous section of this paper, which allows for utilities to invest in modernizing Virginia’s power grid. While this legislation was a move in the right direction for renewable and clean energy, there are still gaps within the law that are preventing the implementation of an effective grid transformation in Virginia. SB 966 defines “electric distribution grid transformation projects” very broadly, which could result in missed opportunities, more wasteful projects, and cost abuse to the ratepayer.

Currently, Virginia has an outdated and antiquated electric grid. The current grid was initially designed to support large fossil fuel plants, with one-way power flow from plants to customers, like many other states in the country. With the growth of renewables entering the grid and lofty climate goals to reduce greenhouse emissions, Virginia needs to build a modern, responsive, and integrated power grid. One way to do this is through the implementation of smart grids. Not only will the implementation of smart grids create a more reliable and efficient system, but it will also collect more timely data on ratepayer’s energy use, which could provide ratepayers with the opportunity to manage their energy consumption and reduce cost.

With the broad definition of the electric distribution grid transformation provided by SB 966, the role of the SCC becomes increasingly vital. Their oversight is essential to prevent wasteful

208 Grid Transformation & Sec. Act SB 966.
209 LESSER & GIACCHINO, supra note 21, at 3–16.
210 OGLETORPE, supra note 75, at 56.
212 Id.
spending by the utilities on plans that are not well-developed or comprehensive.213 In a recent case by the SCC, they state that smart meters and other grid enhancements are only reasonable and prudent if it “is accompanied by a sound and well-crafted plan to fulfill the promise that smart meter technology and other grid enhancements offer.”214 While Dominion Energy is implementing the use of smart meters, it has been at a slow pace, with many locations partially completed or in progress.215 Even though there are some smart meters in operation, to achieve the full benefit of them, each dwelling or building that uses Dominion Energy needs to be equipped with this technology to make a real impact on energy usage.

Overall, SB 966 provides utilities with the opportunity to overhaul Virginia’s grid, which needs to happen if Virginia expects to meet any of their energy and climate goals. But the bill also allows for utilities to be wasteful not only in resources but in ratepayer money with its broad definition. The SCC will have to be vigilant to make sure these projects reduce carbon emissions and promote energy efficiency for Virginians before the bill can be passed on to them.

E. Dominion Force vs. SCC

To promote and transition Virginia to a clean energy future, the SCC needs to have its powers re-established to protect ratepayers and to combat the force Dominion has in the state. Dominion Energy is one of the biggest U.S. utility companies and wields outsized political power in Virginia, where it has designed the rules that oversee its operations.216 Under the Virginia Constitution, it

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213 OGLETHORPE, supra note 75, at 58 (citing SCC case in 2018 when Dominion requested approval for Phase I of their ten-year grid modernification plan. The entire plan will cost customers $6.0 billion and Phase I will cost about $1.5 billion. Of the proposed areas the SCC only approved one—the cyber and physical security and telecommunications proposals. For everything else the SCC found that the proposals were not cost effective or reasonable and prudent and would result in an economic loss for all customers).

214 Id.


vested the SCC with the regulatory authority over many business and economic interests in Virginia, including public utilities.\textsuperscript{217} The purpose of the SCC is to apply law and regulation to balance the interests of citizens, businesses, and customers regulating Virginia’s business and economic concerns and work to improve the regulatory and administrative processes continually.\textsuperscript{218} Without the SCC having their full power to protect customers on rate structure by utilities, it defeats the purpose of having regulated utilities.\textsuperscript{219}

Some of Dominion’s power grabs include spending at least $59 million since 1998 on campaign contributions, lobbying, and gifts to influence Virginia legislators and officials.\textsuperscript{220} Between 2008 and 2016, Dominion gave over $430,000 in meals, cocktails, conferences, sporting events, and hunting trips to influence politics in Virginia.\textsuperscript{221} Also, Dominion has repeatedly crafted and re-crafted Virginia’s utility rules to benefit themselves while driving up electric bills for Virginians.\textsuperscript{222} In 2007, Dominion pushed for re-regulation and prevented the SCC from lowering consumer electric rates but obligated them to approve rate hikes if Dominion’s profit slid.\textsuperscript{223} Leading Dominion raising its electric prices by eighteen percent in 2008 and increased its revenues by $300 million and ratepayer bills by $1.8 million.\textsuperscript{224}

In 2015, Dominion wrote new legislation that reduced SCC oversight even further and locked in Dominion’s favorable prices.\textsuperscript{225} The bill froze electricity rates until 2022.\textsuperscript{226} It eliminated the biennial review of Dominion’s base rates, which allowed the SCC to

\begin{footnotesize}
\textsuperscript{217} VA. CONST. of 1776, art. IX (1902); VA. ADMIN. CODE § 5-10-10 (2020).
\textsuperscript{218} About the SCC, STATE CORPORATION COMMISSION, https://scc.virginia.gov/pages/About-the-SCC.
\textsuperscript{219} Id.
\textsuperscript{220} FOOD & WATER WATCH, supra note 216, at 2.
\textsuperscript{221} Id. at 2.
\textsuperscript{222} Id. at 10 (referencing the 2015 rate freeze bill crafted by Dominion that may have allowed them to overcharge by more than $425 million in 2017, which allows for projects without review form the SCC to go into the utility’s rate base).
\textsuperscript{223} Id. at 12.
\textsuperscript{224} Id.
\textsuperscript{225} Id.
\textsuperscript{226} Id.
\end{footnotesize}
lower rates or order rebates if Dominion’s earnings exceeded fair returns. Dominion justified the rate freeze as a way of insulating the utility from the costs of having to comply with the Obama administration’s proposed Clean Power Plan and Climate Policies. The freeze allowed Dominion to capture $300 million to $700 million in excess profits in just two years.

In 2018, Dominion yet again helped crafted another bill to replace the rate-freeze bill. The Washington Post reported that Dominion’s new legislative efforts constituted “an exercise of raw power” to prevent the public from putting a regulatory leash on Dominion. The legislation partially restored oversight to the SCC of electric base rates, but with review to be conducted every three years. By extending the review to every three years, this will slow the SCC’s ability to deliver rebates to consumers from overpayments. Also, the legislation allows for Dominion to overcharge customers without providing rebates if they invest the funds in infrastructure improvements like underground power lines or building renewable power generation. When the legislation was up in the General Assembly, both the SCC and Attorney General’s Office warned that the legislation would not protect consumers.

If Dominion continues to have their political power and the SCC does not have their proper authority, it will always be a David and Goliath story in Virginia. More recently, the SCC has been pushing back on Dominion by denying their IRP proposal and other project proposals stating that they are not prudent or reasonable for ratepayers to have to burden the cost. The coming years of state

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227 Id. at 12.
228 Id. at 13.
229 Id.
230 Id.
232 Id. at 13.
233 Id.
234 Id.
235 Bade, supra note 66. See also SCC Approves Dominion Energy Virginia Revised IRP; Warns of Increased Monthly Bills to Customers, STATE CORPORATION COMMISSION (June 27, 2019), https://www.scc.virginia.gov/newsrel/r_
elections and SCC decisions will be a telling point for where the SCC will stand in the battle against Dominion and protecting ratepayers.

Overall, there are many gaps in Virginia law from energy efficiency solar power, grid transformation, and even the sheer power of Dominion energy. Governor Northam’s executive order attempts to fill those gaps and reduce barriers, and also use the political power of Dominion to his advantage to get what the State needs in terms of energy policy.

IV. HOW VIRGINIA CAN IMPLEMENT CLEAN ENERGY POLICY

A. Legislative Action Needed

Although Governor Northam’s executive order was inspiring at first, it takes a different turn after looking deeper into what Virginia law is already doing. For this executive order to not only be good public publicity for the Governor but to do something for the state, legislative action needs to happen in the 2020 and 2021 sessions. Right now, not only in Virginia but in many states, it is legal to burn as much fossil fuels in your basement and car without any restrictions, but to have solar many restrictions make it too difficult and burdensome to continue to invest in solar on your home. Five significant actions can implement clean energy policy in the state if enacted by the legislature: (1) legally binding energy efficiency programs; (2) legislation that is prioritizing energy storage and offshore wind; (3) legislation that restores the SCC’s ratepayer protection power; (4) legislation that uses the VA tax code to create incentives; and (5) legislation that redefines renewable energy and defines clean energy for Virginia. There needs to be legislative action because once there are statutory requirements, the public can sue companies and utilities for not meeting the statutory goals.

First, in 2020 and 2021, the General Assembly needs to support and pass legally binding energy efficiency programs that

domirp_19.aspx (referencing that the SCC approved the IRP after it was initially denied).
encourage and enforces utilities, like Dominion, to reduce demand and generation but also rewards the utility for accomplishing these reductions. The way the law is written today, there are no consequences for not meeting energy efficiency goals, even with the Governor’s order to reduce consumption by ten percent by 2030.\(^{236}\) There are several ways that the legislature can accomplish energy efficiency. First, legally joining RGGI and devoting no less than fifty percent of revenue to energy efficiency programs.\(^{237}\) The legislature would have to join RGGI formally, and part of that legislation needs to include where the revenue will go.\(^{238}\) The two significant places for where the revenue should go is energy efficiency and costal resilience for Virginians.\(^{239}\) Second, the legislature can alter the traditional revenue requirement that Virginia utilities are under to a performance base profit rather than spending.\(^{240}\) A performance base profit rewards utilities for such things as lowering cost, reducing demand, and investing in energy efficiency.\(^{241}\) Third, the legislation should adopt energy efficiency standards.\(^{242}\) One standard should require electric and gas utilities to achieve industry-leading efficiency-driven load reduction goals.\(^{243}\) Another should require utilities and regulators to prioritize energy efficiency and demand-side management program solutions over building new fossil fuel burning plants.\(^{244}\) Lastly, the legislature should adopt new building codes that meet or exceed the latest national and international

\(^{236}\) Executive Order 43, \textit{supra} note 17; VA. CODE ANN. § 67-201.

\(^{237}\) Oglethorpe, \textit{supra} note 75, at 55.


\(^{239}\) Oglethorpe, \textit{supra} note 75, at 55.

\(^{240}\) Aggarwal & Harvey, \textit{supra} note 186.

\(^{241}\) \textit{Id.}

\(^{242}\) Oglethorpe, \textit{supra} note 75, at 55.

\(^{243}\) \textit{Id.}

\(^{244}\) \textit{Id.} (recommending that the SCC should deny new projects for demand/capacity and approve projects that encourage energy efficiency).
standards. Also, they should not only allow but encourage local governments to require greater energy efficiency within their jurisdictions and not be limited because of state law. There are many other ways Virginia can implement energy efficiency programs, but the four mentioned are the few that would make dramatic impacts on our energy efficiency.

Second, the legislature should prioritize energy storage and offshore wind with more renewables coming online and with Dominion’s commitments to offshore wind. SB 966 authorizes Dominion Energy to invest in grid modernization, and within that modernization, not only does it need to build the needed transmission lines, but also to invest in energy storage. As distributive solar, including utility-scale and on homes, grows energy storage on buildings will be critical. This storage will serve to make the grid more reliable and resilient to changes on the grid that renewables have. Since Dominion has committed to building 220 wind turbines off the coast of Virginia, Dominion will need to also invest in ways to store energy from that project that is not needed at the time of use and can be stored and used later. Overall, the legislature needs to enact laws that encourage energy storage over the construction of new energy generation.

Third, the legislature in the coming sessions needs to enact legislation that restores the SCC ratepayer protection powers and even allows for new rate review earlier than 2021. The legislation needs to the SCC’s ratepayer protection powers to minimize the customer cost of coal and gas plant retirements, the construction of new renewable generation sources, and the cost to modernize the

245 Id.
248 Id.
249 Gheorghiu, supra note 63; Walton, supra note 102.
250 OGLETORPE, supra note 75, at 65.
grid. With the Governor’s call for 30 percent renewable by 2030 and 100 percent, carbon-free energy by 2050 Virginia will need to retire its remaining coal and gas plants and build generation sources to support Virginia’s energy demand. With the rate freeze and current rate design, Dominion Energy and APCo can pass along these expenses to their ratepayers and will impact low-income families the hardest. The SCC needs to have the power to regulate and approve what cost is being passed down to customers and to ensure that their rates are just and reasonable. If the SCC is not able to do this, the ratepayers will be forced to pay the cost of not only the retirement of plants but also the cost to build expensive cleaner energy generation that the utility can afford and should develop.

Fourth, the legislature should enact legislation that amends the tax code to incentivize investments in renewable energy. Currently, there are no tax incentives or rebates in Virginia that encourages Virginians to install solar on their homes. The legislature should create a tax incentive that supports distributive solar on residential homes, while also removing barriers that limit customers from this initial investment, to begin within the net metering provisions of the code. Also, the legislature should offer rebates or tax incentives to own electric vehicles because it will create more of a demand for charging stations and balance out the grid with renewables being added. Overall, the state needs to use the tax code to

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251 Id.; See, Lesser & Giacchino, supra note 21, at 45–74 (explaining the economic concepts of utility regulation and rates). See generally JIM LAZAR, ELECTRICITY REGULATION IN THE US: A GUIDE (2016) (supporting how rates for regulated utilities are created).
252 Executive Order 43, supra note 17.
254 Id.
255 OGLETHORPE, supra note 75, at 67.
258 In Virginia there is a $64 annual license for EVs fee. https://www.dmv.virginia.gov/vehicles/alternative_vehicles.html.
create incentives for home-owners and create opportunities for low-income homes to invest in solar or wind on their property.

Lastly, the legislature needs to enact legislation that re-defines renewable energy, defines clean energy, and creates a mandatory renewable portfolio standard. Virginia currently defines renewable energy as power from sunlight, wind, falling water, biomass, energy from waste, municipal solid waste, wave motion, tides, and geothermal power.\[^{259}\] “[E]nergy from waste, [and] municipal solid waste,” should be considered as dirty renewable energy because while the technology used creates renewable natural gas, it still emits greenhouse gasses during generation unlike the other sources mentioned.\[^{260}\] The legislature should classify which renewable sources of energy will account for the thirty percent by 2030 in the Governor’s executive order since there is no definition within the order.\[^{261}\] The legislature should re-define what renewable energy is to remove the dirty sources or create an exception that energy from waste or municipal solid waste cannot go towards the goals of the state.

Next, the legislature needs to define what clean energy is and how it can be used in the state. Currently, Virginia does not have a definition of clean energy.\[^{262}\] In the executive order, Governor Northam uses the term carbon-free energy, which is and can be different than clean energy depending on the definition the legislature assigns it.\[^{263}\] Carbon-free includes nuclear energy generation along with many definitions of clean energy as well.\[^{264}\] If Governor Northam intended to include nuclear energy in Virginia’s energy

\[^{259}\] VA. CODE. ANN. § 56-576.

\[^{260}\] Id. (defining renewable energy in Virginia as “[E]nergy from waste, [and] municipal solid waste,” should be considered as dirty renewable energy because while the technology used creates renewable natural gas, it still emits greenhouse gasses during generation unlike the other sources mentioned).

\[^{261}\] Executive Order 43, supra note 17.

\[^{262}\] VA. CODE. ANN. § 56-576 (2019).

\[^{263}\] Executive Order 43, supra note 17.

\[^{264}\] Scott Sklar, Top Six Reasons We Need a Better Definition of Clean Energy, RENEWABLE ENERGY WORLD (Mar. 26, 2012) (defining clean energy as electric energy that is generated at a facility placed in service after December 31, 1991, using renewable energy, qualified renewable biomass, natural gas, hydropower, nuclear power, or qualified waste-to-energy).
mix, then the legislature can clarify this by adding it in a clean energy definition or reject it by not including it in the definition.

However, Governor Northman may not need to rely on legislative action but could accomplish the state goals through regulatory agencies under the domain of the governor. The regulatory agencies under the governor include the DMME and DEQ.\textsuperscript{265} Although the SCC is not under the powers of the governor this does not mean that the DMME and DEQ cannot promulgate the necessary regulations to accomplish the Governor’s energy goals.\textsuperscript{266} Other Governors who were in similar positions as Governor Northam have done this successfully.\textsuperscript{267} For example, former Governor George Pataki of New York accomplished his own environmental and energy goals through executive orders and through regulatory agencies under the domain of the governor to effect change rather than waiting on the state legislature.\textsuperscript{268} Former Governor Pataki used his executive powers to advance an environmental agenda that included a bond act, a watershed agreement, the reduction of energy usage by state agencies, as well as an agreement with governor of seven states to create the know RGGI cap-and-trade program.\textsuperscript{269} Former Governor Pataki and his Chief of Staff, John Cahill, asserted the modern structure of executive and legislative powers and stated that “governor and executives need to find a way to go around the legislature to keep the ball rolling on important issues.”\textsuperscript{270} Even with the legislative flip if they still do not act then Governor Northam could use his authority over the DMME and the DEQ to push forward his goals for energy in the Commonwealth.

Lastly, the Virginia legislature needs to make their renewable portfolio standard mandatory and remove municipal solid waste

\textsuperscript{265} See Governor’s Cabinet, VIRGINIA GOVERNOR RALPH S. NORTHAM, https://www.governor.virginia.gov/the-administration/governors-cabinet/.
\textsuperscript{266} Id.
\textsuperscript{268} Id.
\textsuperscript{269} Id.
\textsuperscript{270} Id.
and energy from waste from counting towards the goal.\textsuperscript{271} Without having a more stringent goal and sticker standards for what renewable energy is and can come from Virginia, will not meet its thirty percent goal by producing clean, renewable energy in the state and can purchase renewable energy out-of-state.\textsuperscript{272}

B. Risk Threatening Executive Order 43

Although the executive order does not have strong legally binding terms, it does create mandatory standards for the state government, creating a lead-by-example program.\textsuperscript{273} But there is more the state can do to lead the way towards a clean and sustainable future along with the reduction of energy use and building codes. For example, the state can also mandate that all government vehicles be electric, which would increase the demand for charging stations and encourage civilians to purchase electric vehicles. Not only will this change encourage the purchase of EVs, helping maintain grid stability with the addition of new renewables entering the grid.

There are several risks to executive order 43 that make this order from becoming the framework for Virginia’s energy policy or being a faded memory about Governor Northam in the next decade. First, the order calls for a plan on how to achieve the thirty percent renewable energy goal by 2030 and 100 percent carbon-free by 2050 in July of 2020, missing the 2020 legislative session in Virginia, which means that no action to enforce this order can happen until 2021. Second, between now and 2021, a lot can change politically in Virginia. This November, all forty seats of the Virginia State Senate and 100 seats of the House are up for re-election, which could dramatically change how climate and energy bills are pushed through

\textsuperscript{271} VA. CODE. ANN. § 56-585.2 (2016).
\textsuperscript{272} Adryan Corcione, \textit{What Is Greenwashing?}, BUSINESS NEWS DAILY (Jan. 17, 2020), https://www.businessnewsdaily.com/10946-greenwashing.html (explaining greenwashing as occurring when a company or organization spends more time and money claiming to be “green” through advertising and marketing than implementing business practices that minimize environmental impact).
\textsuperscript{273} Executive Order 43, supra note 17 (referencing sections two and three of the order that sets new goals for the Commonwealth).
the legislature.\textsuperscript{274} While any legislation for this order cannot happen until 2021, what happens in 2020 can make it either dramatically easier or harder for Virginians to have legislation they need for better energy and climate change. Lastly, 2022 is Governor Northam’s last year in office for his first term as Governor, which made this past election even more important for Governor Northam to push the directives from the order through the legislature to become law.\textsuperscript{275} Lastly, in 2022, depending on who Governor Northam’s successor is can have a dramatic impact on whether these goals and directives will happen or just part of the legacy he leaves behind.

C. The 2020 Legislative Session

The new decade has been a busy start for Virginians as the General Assembly started their 2020 session on January 8. With the recent flip in both the house and senate gave climate and energy activist the moral boost they needed to make 2020 the year where the legislature creates a framework to transition the Virginia economy to 100 percent renewable. While there are dozens of other bills that aim to reform Virginia energy law the focus is on two very different omnibus bills. These two bills would not only create this framework but it would codify Governor Northam’s Executive Order 43, the Clean Economy Act, and the Green New Deal Act.\textsuperscript{276}

\textbf{i. Bills Proposed}

A coalition of renewable energy industry and environmental groups put forward the Clean Economy Act (“CEA”). Delegate Rip Sullivan of Fairfax and Senator Jennifer McClellan of Richmond are the sponsors of the act in house and senate respectively.\textsuperscript{277} The goal

\textsuperscript{274} VA. CONST. ART. V. § 1.
\textsuperscript{275} See id. (stating that a Governor is elected to a four-year term, and that the Governor may not run for two successive terms. Because Governor Northam was sworn into office in January of 2018, his term will end in January of 2022 and he will be in-eligible to run for Governor in the next succeeding election).
\textsuperscript{277} Virginia Clean Economy Act, supra note 276.
of the CEA is to bring zero-carbon electricity supply to Virginia by 2050.\textsuperscript{278} One of its key features is the required increase a three percent increase in renewable energy every year from 2021 to 2050.\textsuperscript{279} Also, under energy efficiency utilities must achieve energy savings that increases to two percent a year by 2027.\textsuperscript{280} These modest increases of required investments in renewable energy and efficiency leaves no room for the utilities to argue that the targets will cause them economic discomfort.\textsuperscript{281} The CEA also includes a provision for joining the Regional Greenhouse Gas Initiative to reduce statewide electric carbon emissions by thirty percent by 2030.\textsuperscript{282} This provision is in accordance with DEQ’s carbon regulations finalized last year.\textsuperscript{283}

Further, the CEA includes a provisions to create a mandatory renewable portfolio standard of forty one percent of total electric energy is created by renewable energy by 2030.\textsuperscript{284} But with the generation of total electric energy and with around thirty percent of Virginia’s electric generation coming from nuclear energy Virginia would actually only be receiving around thirty percent of its energy from renewable sources.\textsuperscript{285} This number is nod to the thirty percent by 2030 renewable energy target set by Governor Northam in his Executive Order 43.\textsuperscript{286} Also, the CEA does not change the code’s existing definition of renewable energy, foregoing the opportunity to


\textsuperscript{279} Virginia Clean Economy Act, \textit{supra} note 276.

\textsuperscript{280} \textit{Id}.

\textsuperscript{281} Main, \textit{supra} note 278.

\textsuperscript{282} \textit{Id} (explaining that the state would auction carbon allowances, with 50\% of proceeds funding energy efficiency programs for low-income, disability, veteran and elderly residents; 16\% going to energy efficiency measures on state and local property; 30\% for coastal resilience; and 4\% for administrative costs.)

\textsuperscript{283} Bilyeu, \textit{supra} note 118.

\textsuperscript{284} Virginia Clean Economy Act, \textit{supra} note 276. \textit{See} Main, \textit{supra} note 278 (referencing the total electric energy is defined by the Virginia Code to mean total electric energy minus electricity produced by nuclear power).

\textsuperscript{285} Main, \textit{supra} note 278.

\textsuperscript{286} \textit{Id}.
 exclude biomass, biogas, and other dirty renewables from Virginia’s RPS. Lastly, the CEA includes provisions to include community solar and remove barriers to net metering. The CEA raised the net metering cap to ten percent, raises the commercial size cap to three MW, removes all caps on third-party power purchase agreements, and eliminates standby charges on residential and agricultural customers. And the cherry on top of the CEA is a one-year moratorium on the permitting of any new carbon-emitting generating units that investor-owned utility might want to build.

The second bill to watch is the Green New Deal (“GND”) by Delegate Sam Rasoul from Roanoke. The GND’s major feature is a moratorium on any new fossil fuel infrastructure, an aggressive timetable for 100 percent renewable energy by 2036, new energy efficiency standards, a mandate for building to decrease energy use, low-income weatherization, job training and the hiring of workers from environmental justice communities and assistance for workforce transition for fossil fuel workers.

The GND’s moratorium on new fossil fuel infrastructure not only covers electric generating plants but also pipelines, refineries, import and export terminals and fossil fuel exploration activities. It directs the DMME to develop a climate action plane that addresses mitigation, adaptation and resiliency, and supports publicly-owned clean energy, while incorporating environmental justice principles. Under the GND the energy efficiency standards require a savings of 2.4 percent annual increase starting in 2020. Also, the GND does have an RPS goals compared to the CEA. It also appears that the GND’s mandate of achieving 80 percent renewable energy by 2030 can be achieved by utilities buying renewable energy certificated from other states. Sadly, the bill contains no requirement to build

287 Id.
288 Id.
290 Id.; Main, supra note 278.
291 Main, supra note 290.
292 Id.
293 Id.
294 Id. (noting that this is the intention of Delegate Rasoul).
wind and solar like its counterpart the CEA and allows utilities to run their fossil fuel plants as usual.\textsuperscript{295}

Although the CEA and GND are the two major bills to watch there are dozens of more bills that could change Virginia energy law. One of the key policy tools to encourage renewable energy growth is a mandatory renewable portfolio standard or RPS.\textsuperscript{296} In addition to the RPS requirements under the CEA and GND there is a stand-alone RPS bill that includes energy storage that has been filed by Delegate Sullivan.\textsuperscript{297} Also, instead of an RPS, Senator Marsden established a “clean energy standard” that is applicable to both investor owned utilities and co-operatives.\textsuperscript{298}

Next, bills related to customer-sited solar or also known as “solar freedom” is back this session in attempt to lift barriers to customer-sited renewable energy, including rooftop solar.\textsuperscript{299} The main feature is raising the cap from one percent to ten percent on the total amount of solar that can be net metered in a utility territory.\textsuperscript{300} Lastly, there are bills relating to PPA agreements, net metering bills, customer rights to renewable energy, offshore wind, resilience hubs, home owner association bills, community solar, and financing solutions.\textsuperscript{301}

All in all, the 2020 legislative session has hit the ground running with a wide array of energy bills that if enacted into law would change the energy landscape of Virginia. Many of these bills codify

\textsuperscript{295} Id.
\textsuperscript{296} Id.
\textsuperscript{298} See S.B. 876, 2020 Leg., Reg. Sess. (Va. 2020); A clean energy resource is defined as “any technology used to generate electricity without emitting carbon dioxide into the atmosphere,” including “(i) electric generation facilities that are powered by nuclear, solar, wind, falling water, wave motion, tides, or geothermal power; (ii) a natural gas-fired generation facility with 80 percent carbon capture; or (iii) a coal-fired generation facility with 90 percent carbon capture.”
the goals of Governor Northam’s Executive Order 43 from last September. Virginians have spoken that they want cleaner energy sources and have acknowledged that we need to act on the climate crisis when they voted to flip the legislature this past November. Now, it is time for the people they elected to propose and enact a framework that will transform Virginia’s economy into a clean energy economy.

ii. What Passed, What Failed, and What Is the Law Now?

As the 2020 General Assembly Legislative session comes to end one bill has remained supreme through the legislative process – the Clean Economy Act. Most of the bills that have been passed by both the house and senate are now awaiting Governor Northam’s signature to become law. In Virginia, the Governor is allowed to propose amendments to these bills before signing them. The bills that are signed into law by the Governor will come into effect on July 1, 2020. There were three major steps taken in for energy policy in Virginia that offers some light at the end of the tunnel in this fight against the climate crisis. First, the final version of the CEA is a comprehensive plan for a clean energy transition. Second, the Solar Freedom bill that will lift restrictions for customers who want to partake in community solar and net metering. Lastly, a variety of bills that deal with offshore wind, energy efficiency, nuclear energy, and energy storage.

The CEA is by no means the perfect construction of a clean energy transition, but what it does offer is a new beginning for Virginia. Even so the bill itself is groundbreaking and transforma-

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302 Executive Order 43, supra note 17.
303 Ivy Main, It’s Halftime at the GA, and Do We Have a Show!, POWER FOR THE PEOPLE VA (Feb. 11, 2020) https://powerforthepeopleva.com/2020/02/11/its-halftime-at-the-ga-and-do-we-ever-have-a-show/.
304 Ivy Main, It Was a Messy, Chaotic General Assembly Session. It Also Worked Out Pretty Well, POWER FOR THE PEOPLE VA (Mar. 16, 2020), https://powerforthepeopleva.com/2020/03/16/it-was-a-messy-chaotic-general-assembly-session-it-also-worked-out-pretty-well/.
305 Id.
306 Id.
tional for a state that was once at the bottom of ranking for clean energy policy. The CEA includes a major energy efficiency component, replaces Virginia’s voluntary renewable portfolio standard with a mandatory utility ownership for solar and wind generation, and allows for Virginia to finally join the Regional Greenhouse Gas Initiative (RGGI). Even with this remarkable success there has been significant debate over the economic analysis of the CEA. On one hand, an analysis by 5 Lakes Energy, the CEA would reduce bills of average residential customers in Virginia from $122.28 per month in 2020 to $118.87 per month by 2030. On the other hand, according to the SCC’s analysis has Dominion Energy collecting approximately $50.8 billion more from its customers due to the provisions of the CEA to pay for cost of implementation. Critics of the SCC and advocates of the bill state that the SCC’s analysis saying that the calculations do not take into account the benefits of improved energy efficiency, renewable growth, energy storage, and other initiatives mandated by the CEA. Again, while the CEA may not be perfect, it is just the start Virginia needs to transition to a clean energy economy.

Another exciting development that has come from not only the CEA but the Solar Freedom bills that lift barriers to customer-sited and net metering solar. The Solar Freedom package by the legislature is composed of four bills: (1) SB 710; (2) HB 572; (3) HB 1184; and HB 1647. It is important to note that some of the provisions in these four bills are also in the CEA. These new bills and provisions lift the net metering cap to six percent for IOUs,

308 Main, supra note 304.
309 Id.
310 Id.
311 Id.
312 Id.
313 Id.
314 Id.
which was previously set at one percent.\textsuperscript{315} Also, raising the Power Purchase Agreements (PPA) to 1,000 MW in Dominion territory.\textsuperscript{316} While this is just the surface of what the solar freedom bills mandates there is new clarity for homeowner association and residents who want to install solar under HB 414 and SB 504.\textsuperscript{317} The law allows homeowners associations (HOAs) to impose “reasonable restrictions,” which some HOAs have used to restrict solar to rear-facing roofs. The bill clarifies that these reasonable restrictions may not increase the cost of the solar facility by more than five percent or decrease the expected output by more than ten percent.\textsuperscript{318}

Lastly, an array of other bills have been passed including new provisions for offshore wind, nuclear energy, energy efficiency, and energy storage. First, for offshore wind many of the provisions are in the CEA that allow for buildout and acquisition of offshore wind.\textsuperscript{319} But, in three separate bills puts the construction or purchase of at least 5,200 MW of offshore wind in the public interest and governs cost recovery for the wind farms under development by Dominion, mirroring the language of the CEA.\textsuperscript{320} Regarding nuclear energy, it is safe to say that nuclear energy will live on in the commonwealth with the new definition of clean and carbon-free energy proposed this session. In two separate senate bills, the legislature defines clean and carbon-free energy to “include nuclear energy for purposes of the code,” and “declares that nuclear energy is considered a clean energy source for purposes of the commonwealth energy policy.\textsuperscript{321} Next, the CEA, contains a mandatory energy efficiency resource standard and other provisions for spending on low-income energy efficiency programs.\textsuperscript{322} Also, in the RGGI bill (HB 981) specifically specifies that a portion of the funds raised by auc-

\begin{itemize}
\item \textsuperscript{315} Id.
\item \textsuperscript{316} Id.
\item \textsuperscript{317} Id.
\item \textsuperscript{318} Id.
\item \textsuperscript{319} Id.
\item \textsuperscript{320} Id.; SB 860, 2018 Leg., Sess. (Va. 2018); SB 998, 2019 Leg., Sess. (Va. 2019).
\item \textsuperscript{321} Id.; SB 817, 2020 Leg., Sess. (Va. 2020); SB 828, 2020 Leg., Sess. (Va. 2020).
\item \textsuperscript{322} Id.
\end{itemize}
tioning carbon allowances will fund energy efficiency programs.\footnote{Id.} Lastly, the CEA requires that by 2035 APCo will construct 400 MW of energy storage and Dominion 2,700 MW of energy storage.\footnote{Id.} The CEA, was passed on April 11, 2020 by Governor Northam and will be effective on July 1, 2020.\footnote{Matthew Mercure, Northam Signs the Virginia Clean Economy Act, \textit{Solar Industry} (Apr. 14, 2020) https://solarindustry.com/northam-signs-the-virginia-clean-economy-act; HB 1526, 2020 Leg., Sess. (VA. 2020).} This past year has been a whirlwind for Virginia energy policy. The state has gone from a complete laggard in the field to a now known leader in clean energy policy and reform. These bills are only the beginning for what Virginia can do for clean energy policy and for the planet.

\section*{V. Conclusion}

We have seen the tides change in Virginia since 2007. Where we started almost thirteen years ago is not where we are today. The energy sector represents thirty percent of the carbon dioxide emissions in Virginia and is an essential part of the puzzle to combat climate change in this century.\footnote{Executive Order 43, \textit{supra} note 17.} With today’s energy issues in mind, we have seen the beginning of the transition to a modern electric grid that not only incorporates but encourages clean and efficient energy technologies. In part, these changes did not happen by choice of the industry but by the decision of the people. There have been political, economic, and social changes that have led to this point in time. Virginia is on the right path with the Governor enacting Executive Order 43. Still, there are many obstacles ahead, such as the legislature, the SCC, Dominion political might, and the lack of regulations and policy in the state.

But overall, the order seems to be more of the same old and a political stunt to make it appear that Virginia is trying to be eco-conscious with its directives when it is more of the same and nothing that takes real action. The actions that follow this order will speak volumes to where Virginia is going. Virginia has the unique
opportunity to change their industry and become a leader in the field. But what happens in the months ahead will be the true tell signs to where Virginia is going. The actions of the State Legislature this past session spoke volumes with the creation and enactment of the CEA. The CEA was the action Virginia needed after the Executive Order was placed and has solidified the path for clean energy in the state.