

ACHIEVING 100% CLEAN ENERGY

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WHY IT MATTERS

Experts continue to warn that governments across the world must cut greenhouse gas emissions significantly in the short term to ensure a stable, healthy climate for current and future generations.¹ Decarbonizing the economy begins with the electric sector, which is directly responsible for nearly a third of Virginia's carbon pollution, and is particularly important as we electrify cars and buildings.²

Virginia committed to fully decarbonizing our electric grid by 2050 through the passage of the Virginia Clean Economy Act (VCEA) in 2020. The VCEA outlines a clear path to achieving this zero-carbon future by mandating the retirement of fossil fuel generators; requiring the construction of solar, wind, and battery storage; gradually increasing our reliance on zero-carbon electricity sources; and instructing utilities to meet energy efficiency standards.

The VCEA's Renewable Portfolio Standard (RPS) ensures that utilities remain on track to meet 2045 and 2050 targets for a zero-emission electric sector. To facilitate this transition, utilities will need to deploy the suite of proven tools that can bring clean energy online faster, including advanced reconductoring, distributed energy resources (DER), and grid-enhancing technologies (GETs).

CURRENT LANDSCAPE

The passage of the VCEA established Virginia as a leader in the clean energy transition. The State Corporation Commission oversees the four main components of the VCEA to ensure a reliable and affordable transition to clean energy:

100% RENEWABLE ENERGY PORTFOLIO STANDARD

The RPS ensures that the state's electric mix gradually moves to zero-carbon by mid-century by gradually increasing the percentage of the electricity mix that must be derived from renewable, zero-carbon sources.³ State-level renewable portfolio standards are highly effective – responsible for over 50% of clean energy growth in the country.⁴ To jumpstart RPS compliance, the VCEA requires Virginia's utilities to petition for a total of 16.7GW of solar and on-shore wind capacity, as well as 5.2GW of offshore wind.⁵

BATTERY STORAGE

The VCEA sets a target of 3100MW of energy storage by 2035 and requires 10% of energy storage projects to be deployed for power backups at hospitals, government facilities, and other essential services.⁶

ENERGY EFFICIENCY RESOURCE STANDARD

The Energy Efficiency Resource Standard (EERS) requires Dominion and Appalachian Power to meet a specific portion of their electricity demand through energy efficiency.⁷ Under the VCEA, utilities may not build out new fossil fuel generation if they have not hit their EERS targets – unless they can demonstrate energy reliability concerns. Such facilities are likely to become expensive stranded assets as we move to a zero-carbon grid, saddling Virginians with higher energy bills and more pollution.

FOSSIL FUEL RETIREMENT

The VCEA requires Dominion and Appalachian Power to retire their fossil fuel plants by 2045 and 2050, respectively, including almost all of Dominion's coal-fired power plants by 2030.⁸ The VCEA allows utilities to petition the SCC to keep those plants open longer if closing them could negatively affect reliability.⁹

Unfortunately, utilities have been slow to adopt cleaner tools to meet energy demand, and Virginia's electricity is still reliant on fossil fuels, which collectively make up over 60% of our generation at present.¹⁰ However, Virginia is proceeding in the right direction as we move down the path outlined in the VCEA.

OPPORTUNITIES

The VCEA, along with the Regional Greenhouse Gas Initiative (RGGI), put Virginia on a clear and stable path to a zero-carbon grid by 2050 (see page 101). It must be implemented to its fullest potential to ensure a healthy environment for all Virginians.

The VCEA provides a roadmap for how Virginia's future energy needs will be met with new, clean energy sources. While the VCEA allows for possible new, zero-carbon technologies to contribute to those efforts, the VCEA must continue to incentivize proven clean energy technologies, such as offshore wind, solar, and energy storage. It is important to note that Virginia is facing significant load growth from data centers and other sources in the coming years. Under the VCEA, 100% of this load should be met with clean energy (see page 77). Because the VCEA requires utilities to procure most of their renewable energy from sources within Virginia, their doing so will incentivize the development of a strong renewable energy industry in the Commonwealth.

Utilities can achieve these 100% goals by continuing to adhere to the VCEA's roadmap. They also can and should utilize tools to improve energy efficiency (see page 111) and encourage more rapid development of

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new clean energy sources. Advanced reconditioning, DER, and grid-enhancing technologies all would help get new solar, wind, and storage sources integrated into the grid more quickly (see page 113). The same is true for efforts to address untimely delays or unreasonable costs associated with grid interconnection. Utilities and regulators can and should do more to promote those efforts (see page 137).

TOP TAKEAWAYS

The VCEA outlines a pathway to achieve a zero-emission electricity sector through a Renewable Portfolio Standard, an Energy Efficiency Resource Standard, a responsible fossil fuel generation retirement schedule, and the buildout of clean energy and battery storage.

As written, the VCEA already allows for new, zero-carbon technologies to contribute to our clean energy goals. With that being said, the incentives within the VCEA should remain dedicated to proven clean energy technologies such as wind, solar, and battery storage.

New fossil fuel generation risks our health, environment, and economy. Energy efficiency, distributed energy resources, advanced reconditioning, and grid-enhancing technologies should be embraced to accelerate an affordable clean energy transition.



ENDNOTES

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4. Joshua S. Hill, "Renewable Portfolio Standards Responsible for over 50% of US Renewable Electricity Growth," CleanTechnica, (April 21, 2016). <https://cleantechnica.com/2016/04/21/renewables-portfolio-standards-responsible-half-us-renewable-electricity-growth/>.
5. Va. Code § 56-585.5.
6. "The Virginia Clean Economy Act (HB1526 and SB851): Putting Virginia on the Path to 100% Clean Electricity Create New Ratepayer Protections to Keep Bills Low." CCAN Action Fund, (June 14, 3, 2023). <https://ccanactionfund.org/media/Virginia-Clean-Economy-Act-update-factsheet.pdf>.
7. "Energy and Environment Guide to Action - Chapter 4.1: Energy Efficiency Resource Standards," US Environmental Protection Agency (June 23, 2017). <https://www.epa.gov/statelocalenergy/energy-and-environment-guide-action-chapter-41-energy-efficiency-resource>.
8. "The Virginia Clean Economy Act," CCAN Action Fund.
9. Charlie Paullin, "Regulators Question Decision-Making Power for Fossil Fuel Plant Closures," *Virginia Mercury*, (September 6, 2022). <https://www.virginiamercury.com/2022/09/06/regulators-question-decision-making-power-for-fossil-fuel-plant-closures>.
10. "Virginia - State Energy Profile Overview," U.S. Energy Information Administration (EIA). <https://www.eia.gov/state/?sid=VA>.