

2023 State of Renewables in Virginia

Virginia has made considerable progress over the past decade toward cleaner, more sustainable energy. Solar has made incredible gains in Virginia since 2014, when output was less than 25 MW. In 2022, solar capacity was 4,286 MW and the Commonwealth ranked ninth nationally for solar energy production. However, Virginia still lags behind in many areas. At the outset of the 2023 Legislative Session, a group of bills introduced in the House and the Senate promised to make bounds in Virginia's approach to better energy policy. These bills, among other things, attempted to establish retail clean energy choice for Virginia residents (SB1419), increase public financing for clean energy (SB949), and create official recommendations for incorporation of renewable energy into public school projects (SB848/HB1842).

Despite clear enthusiasm from General Assembly members to move Virginia's energy policy forward, all of the bills mentioned above, and more, failed to pass their respective committees. Additional assaults on Virginia's progress were attempted by some members, though luckily they also met the same fate. Still, there is much to be excited about for the path of clean and renewable energy in Virginia. This report will provide a brief update on the status of Virginia's renewable energy policy and practice, detailing how far we've come and what we can look forward to in the future.

Virginia and its Neighbors: Renewable Portfolio Standards

Powered By Facts grew from a need to provide an unbiased, fact-based source to question, probe, and bring transparency to Virginia's energy choices. Since 2014, we have advocated for legislation and policies that will bring residents of Virginia the cheapest, safest and most reliable energy possible. To date, Powered By Facts has helped pass 14 bills to help grow renewable energy and solar in Virginia. Much of this legislation, such as the Virginia Clean Economy Act and the Clean Energy and Community Flood Preparedness Act, were passed as landmarks of progress in the Commonwealth.

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In order for states to meet renewable energy goals, renewable portfolio standards and/or clean energy standards are established and imposed on utilities to generate electricity from specific renewable resources.

- **Renewable Portfolio Standards (RPS):** a specific percentage of the electricity utilities sell must come from renewable resources.
- **Clean Energy Standard (CES):** a specific percentage of the electricity utilities sell must come from sources of energy that have zero carbon emissions.¹

Though RPS and CES encourage increased renewable energy, there is a difference. CES' can permit usage of resources that are not renewable but do not emit carbon; whereas, RPS' can permit usage of renewable resources that emit carbon.

Virginia passed the Virginia Clean Economy Act (VCEA) three years ago, creating its RPS. Virginia had a voluntary goal of 15% renewable energy target by 2025 prior to the passage of the VCEA. The VCEA requires delivery of electricity from 100% renewable sources from Dominion Energy by 2045 and Appalachian Power by 2050. Additionally, the law specifies a certain amount of solar, onshore and offshore wind, and energy storage capacity to be in the public interest.²

Here's how the rest of our region fares:

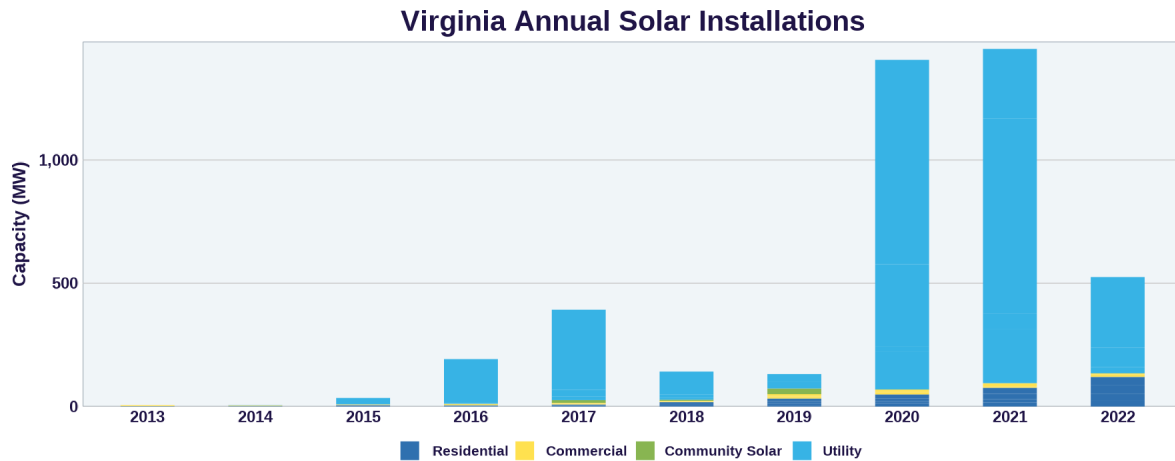
- **West Virginia** established a Renewable Energy Portfolio Standard in 2009 that was subsequently repealed in 2015 and has not been replaced nor reenacted.³
- **Washington, D.C.** established an RPS in 2005 that required 20% by 2020 and 100% by 2032. Additionally, the RPS calls for a solar production goal of 2.5% by 2023, 5% by 2032, and 10% by 2041.
- **Maryland** established a Renewable Energy Portfolio Standard in 2004 that was revised in 2019. Their goals are 50% in 2030. Additionally, Maryland is targeting

¹ "State Renewable Portfolio Standards and Goals," National Conference of State Legislatures, <https://www.ncsl.org/energy/state-renewable-portfolio-standards-and-goals>.

² "Virginia Clean Economy Act Summary," Virginia Department of Mines, Minerals and Energy, <https://energy.virginia.gov/renewable-energy/documents/VCEASummary.pdf>.

³ "State Renewable Portfolio Standards and Goals," National Conference of State Legislatures, <https://www.ncsl.org/energy/state-renewable-portfolio-standards-and-goals>.

This growth has been supported by incremental legislation, advocated for by PBF, that helped increase net metering caps and enhance Virginia’s electric cooperatives.⁷ Additional innovation, such as using wasteland to host solar farms, has helped keep momentum behind solar growth.⁸ Below is a chart that shows solar installations in Virginia, tracking progress from 0 installations in 2013 and 2014 to frequent, large utility-scale installations since 2020.⁹



Source: Solar Energy Industries Association

Looking specifically at solar, here is how Virginia compares to its neighbors:

- To date, 4,286 MW of solar has been installed in **Virginia**; this is enough to power over 476,000 homes. Virginia ranks ninth nationally for total installed solar capacity. Currently, 5.56% of the Commonwealth’s electricity comes from solar. Virginia is projected to install 5,757 MW of solar in the next five years.¹⁰
- **West Virginia** has only installed 30 MW of solar, which can power 2,660 homes. West Virginia ranks 48th nationally. Solar accounts for 0.06% of the state’s electricity.

⁷ "Electric Cooperatives and the Energy Transition," Powered by Facts, <https://www.poweredbyfacts.com/updates/electric-coops>.

⁸ De Ciccio, C 2021, "In America's coal country, solar is leaving fossil fuels in the dust," Reuters, February 22, 2021, <https://www.reuters.com/article/us-usa-energy-coal-solar-feature-idUSKBN2J9189>.

⁹ "Virginia Solar Policy Guide," Solar Energy Industries Association, <https://www.seia.org/state-solar-policy/virginia-solar>.

¹⁰ Ibid.

- **Washington, D.C.** has installed 206 MW of solar, which is enough to power roughly 32,400 homes. Solar accounts for 58.05% of the District's electricity. D.C. ranks 40th nationally.
- With 1,670 MW installed, **Maryland** ranks 17th nationally. This can power roughly 189,400 homes. 4.85% of their electricity comes from solar.
- **North Carolina** ranks fourth nationally with 8,179 MW of solar installed. This is enough solar to power roughly 950,000 homes. 8.92% of the state's electricity comes from solar.
- **South Carolina**, with no RPS or CES, ranks 14th nationally with 2,314 MW of solar installed. This is enough to power roughly 268,800 homes. 2.85% of South Carolina's electricity comes from solar.

The top states for solar electricity generation in the country are the states with the largest populations. **California** ranks first, followed by **Texas** and **Florida**. Despite being ninth on the national list, Virginia's 5.56% of total electricity generated by solar ranks well when compared to the country's top solar producers. Texas only generates 4.81% of its total electricity from solar, even though it has invested in solar for longer than Virginia and has far more utility-scale installations.¹¹

At a macro level, Virginia's success among regional and national peers can be largely tied to the more progressive political dynamics in the Commonwealth, which makes it easier for legislative and regulatory acts to ensure clean energy initiatives are successfully implemented. Virginia famously became the first Southern state to target "100% clean energy" with the enactment of the VCEA.¹² Virginia's openness has made it easier for major corporations, such as Meta, Amazon, and Microsoft, to make 100% clean energy - in this case, solar - commitments in the Commonwealth.¹³

The VCEA also tasked state agencies with developing a carbon cap-and-trade program and to enter the Regional Greenhouse Gas Initiative (RGGI).

¹¹ "Texas Solar Policy Guide," Solar Energy Industries Association, <https://www.seia.org/state-solar-policy/texas-solar>.

¹² Roberts, David. "Virginia just passed the most ambitious clean energy bill in the South," Vox, March 12, 2020, <https://www.vox.com/energy-and-environment/2020/3/12/21172836/virginia-renewable-energy-100-percent-clean>.

¹³ Ibid, "Virginia Solar Policy Guide"

The RGGI is a “cooperative, market-based effort among Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia to cap and reduce CO2 emissions from the power sector.” This is the first of its kind concept nationally. Maryland is our only regional neighbor part of RGGI.¹⁴

Virginia is tracking well against its goals, and a lot of credit can be attributed to effective legislation crafted by a political majority prioritizing a future powered by renewable resources.

Looking Ahead

Up until 2020, Virginia had a voluntary goal of 15% of our electricity to be produced by renewable resources. The passage of VCEA gave Virginia a clear roadmap for a future powered by 100% clean energy. Virginia has made good progress.

The Bath County Pumped Storage Station, which produces 3,003 MW, is the largest of its kind nationally and second-largest in the world. Along Virginia’s coast, Dominion’s Coastal Virginia Offshore Wind (CVOW) project is anticipated to provide 2.6 GW of zero-carbon energy - enough to power roughly 660,000 homes. Construction on the project is expected to commence in 2024.¹⁵ On the solar front, Virginia is a national leader in terms of its total installed solar capacity.

While Virginia can be proud of the progress it has made, there are still areas where improvements can be made. Specifically, considering all legal and regulatory frameworks to support lawmakers in all clean energy related matters.

Supporting Legislators

Virginia and the rest of the country has seen a flurry of clean energy related legislation. Virginia State Senator Scott Surovell acknowledged this point during the 2023 Virginia General Assembly Legislative Session. Surovell and Delegate Terry Kilgore championed companion legislation to “revive a state commission to help analyze bills related to

¹⁴ "Regional Greenhouse Gas Initiative," <https://www.rggi.org>.

¹⁵ "About Offshore Wind," Coastal Virginia Offshore Wind, <https://coastalvawind.com/about-offshore-wind.aspx>.

electric utilities”, as well as utilizing the commission “to robustly monitor the transition and ensure” Virginia is reaching its clean energy goals.¹⁶

Surovell and Kilgore’s bills, which were signed into law, revive the Commission on Electricity Utility Regulation. The commission will be composed of ten legislators and three citizens. The legislative session moves at a hectic pace - introducing and passing bills over the course of 30 to 45 days. It is important to have a body that has the ability to provide the level of focus that is needed, but is difficult to give during a fast-paced General Assembly session.

Additionally, the Commission could be the proper forum to address a national issue of “local governments enacting policies to block or restrict renewable energy facilities”, as well as the role of local opposition negatively impacting promising clean energy projects. The Pleinmont Solar Project, which ultimately succeeded, faced similar issues in Spotsylvania County.¹⁷

The Commission on Electricity Utility Regulation is a positive step in understanding that implementing a clean energy future is not a static process; it will be a dynamic process that will require consistent engagement. The future is bright in Virginia, and there will need to be continuous fine tuning to get to where we need to get.

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¹⁶ Boisvert, Nick. "Complex energy legislation puts burden on Virginia’s part-time lawmakers," Energy News Network, February 14, 2023, <https://energynews.us/2023/02/14/complex-energy-legislation-puts-burden-on-virginias-part-time-lawmakers/>.

¹⁷ Boisvert, Nick. "Complex energy legislation puts burden on Virginia’s part-time lawmakers," Energy News Network, February 14, 2023, <https://energynews.us/2023/02/14/complex-energy-legislation-puts-burden-on-virginias-part-time-lawmakers/>.