

# POWERING PROGRESS THROUGH ROOFTOP SOLAR

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## EXECUTIVE SUMMARY

Distributed rooftop solar has many benefits as we build out the clean energy needed to reach the 100% zero-carbon-emissions standard laid out in Virginia's Clean Economy Act (VCEA). It is built on a pre-existing infrastructure, decreasing the amount of land needed for larger projects, and built in a decentralized fashion creating a more resilient grid. With the right policy landscape, rooftop solar can be deployed quickly (without the need to wait in a queue to be interconnected) which will reduce rising peak demand,<sup>1</sup> decrease carbon-emitting sources on the grid, and increase ratepayer savings. Getting more solar on homes, businesses and solar on schools can reduce costs, enhance public health, and combat climate change.

## CHALLENGE

Distributed energy is any energy that is produced at the same location that it is used and is less than five megawatts of capacity. Many distributed solar energy systems are sited on rooftops and are oftentimes referred to as "rooftop solar". Rooftop solar is oftentimes a much smaller system (less than 25kW). Unfortunately in Virginia, the adoption of rooftop solar on homes and apartment buildings lags because there are not a menu of programs that incentivize rooftop solar for Virginians, especially for those who are low-income. Barriers include the lack of access to upfront capital as well as arbitrary caps placed on the amount of distributed power that can be built as part of our electricity grid.

Developers can offer power purchase agreements ("PPAs") – a financial arrangement where a third-party developer owns, operates, and maintains a solar energy system on a customer's property, and the customer agrees to purchase the system's electric output for a predetermined period. However, the law limits that program's capacity to 500 MW. This cap includes both rooftop and distributed community solar (see EXPANDING ACCESS TO COMMUNITY SOLAR). For residential, only low income customers are eligible for PPAs meaning only those Virginians who can afford the upfront cost of a residential system or who can finance those costs on their own, are able to participate in Virginia's solar net metering program.

Net metered rooftop solar, which is a solar system connected to the grid that allows surplus energy to be credited to the customer, is also limited in scope by law in Virginia. Virginia law currently limits net metered energy to 6% of the previous year's peak-load.

Another major opportunity (and subsequent obstacle) is getting rooftop solar on schools. The Inflation Reduction Act (IRA) now allows for cost-effective solar array installations. Thanks to the IRA, many Virginia schools including those in Richmond, Isle of Wight, and Lee County, have effectively leveraged PPAs to incorporate solar energy into their local infrastructures.<sup>2</sup> Yet, this transformative shift towards renewable energy has been hindered by aging building stock throughout the state. Addressing this issue requires the renovation of existing infrastructure to facilitate the installation of rooftop solar.<sup>3</sup>

## SOLUTION

Virginia can increase the amount of rooftop solar – thus

decreasing the need for more carbon-emitting power plants to meet peak demand by increasing the ability for consumers to access upfront capital, removing restrictive market caps, and ensuring solar-ready roofs. In addition, a state level investment tax credit on rooftop solar could further boost financial capital and has been shown to be effective in increasing installations.<sup>4</sup>

To expand equitable access to rooftop solar, the IRAs Greenhouse Gas Reduction Fund ("GGRF") contains a \$7 billion Solar for All competition, which can provide disadvantaged communities with renewable funding. Expanding the opportunity for PPAs (aka solar leases) and alternative financing can also increase adoption by low-income customers as they can avoid upfront costs. While Virginia's net metering law allows solar leases, certain utilities have declined to expressly consent to interconnect such customers. For purchases, Residential Property Assessed Clean Energy (R-PACE) provides an innovative mechanism for financing renewable energy by avoiding credit checks and using the homeowner's property as collateral. Authorizing the adoption of R-PACE districts with airtight consumer protection provisions has proven to be effective.

Lastly, Virginia schools can reduce energy costs through rooftop solar, freeing funds for vital areas like teachers' salaries. For instance, Highland Springs High School will save \$420,000 over 25 years with solar.<sup>5</sup> The adoption of solar-ready roofs and net-zero designs should be mandated, ensuring a sustainable future.

A robust distributed energy policy can bring more renewable energy to the grid more quickly, decrease peak load demands, take more carbon-emitting sources offline, and move Virginia closer to our 2050 100% zero-carbon requirements as mandated by the VCEA.<sup>6</sup>

## POLICY RECOMMENDATIONS

Increase net metering cap on distributed generation beyond 6% of the previous year's peak load and create state-level investment tax credit (with schools, municipalities, houses of worship and tribal governments receiving direct pay reimbursements) for rooftop solar.

Explicitly allow solar leasing.

Support the VA Department of Energy as it creates a program to disburse the Solar for All funds.

Authorize R-PACE to provide low-income Virginians with an additional option to go solar. Any R-PACE program must contain airtight consumer protection provisions that ensure customers are properly educated about the program and that they have the ability to pay the voluntary assessments.

Require net-zero energy standards and solar-ready roofs for new and majorly renovated schools, enabling renewable energy adoption and long-term savings.