# 1. Program Strategy Narrative

## Executive Summary

Vermont has been a leader in the development and deployment of distributed solar and storage for almost three decades. An early adopter of net-metering, Vermont has more than 330 MW of net-metered solar serving homes and small businesses across the state, and nearly 500 MW of grid connected solar resources overall, relative to a statewide peak load of approximately 950MW. Vermont was ranked as having the 6th highest amount of solar per capita ($/kW) by *CleanTechnica* in 2020.[1]

However, it is clear that these solar resources are not available to all Vermonters: The towns with the highest energy burden in Vermont have the least amount of installed solar, and the towns with the lowest energy burden have the highest amounts of installed solar.[2] While Vermont has begun to make strides in providing access to renewable electricity production to the most vulnerable of its citizens, the Vermont Department of Public Service's Solar for All Vermont (SAV) proposal will mobilize financing and private capital to accelerate the energy transition for the most vulnerable with reduced electric bills and ownership of solar, while significantly reducing greenhouse gas emissions and air pollution.

The primary objective of SAV is to lower the cost of electricity though the benefits of solar to low-income and disadvantaged Vermonters across the entire state, no matter their dwelling situation. SAV will provide the incentives, organizational structures, and program policies needed to install thousands of solar systems on the roofs of low-income and disadvantaged homeowners, on the roofs and sites of managed permanently affordable apartment buildings, and in community arrays that will provide meaningful benefits to the homeowners, affordable housing residents, and renters.

Meaningful benefits to participants and communities will accrue through electric bill savings of over 20% for the life of the solar systems and emission free power generation that will provide local economic development through workforce and solar market development. Ownership options will ensure that these savings endure. Storage installations will increase resilience to grid outages for participants. An estimated 10% of homes receiving SAV assistance for a solar system will also receive support for a battery back-up system and others will benefit from with needed upgrades or repairs to their electric service and/or roofs to that they are able to install solar. The Department of Public Service (PSD) will achieve these meaningful benefits through the implementation of three interconnected programs under the umbrella of SAV.

The Residential Assistance in Solar Energy (RAISE) Program will use $25 million to provide financial incentives and technical support to low-income Vermonters and those in disadvantaged communities who own single-family homes that are suitable for solar installations. The RAISE program will create several avenues for the direct ownership of solar panels on the houses of homeowners who have not previously been able to obtain these technologies, lowering electric bills by an estimated average 23.5% for the first six years with increased savings in future years,

[1] https://cleantechnica.com/2020/10/05/top-us-states-for-percentage-of-electricity-from-solar-cleantechnica-report/
[2] *Vermont Energy Burden Report,* October 2019. Efficiency Vermont. Pg. 24. https://www.efficiencyvermont.com/Media/Default/docs/white-papers/2019%20Vermont%20Energy%20Burden%20Report.pdf

facilitating approximately 8 MW of solar deployment and 4,006 tons of avoided greenhouse gas emissions across 1,598 household participants. It is estimated that the battery storage systems installed will provide a resiliency benefit valued at $25/month to each household that installs one.

The Managed Affordable Solar Housing Program (MASH), will use $40 million to offer benefits to residents of permanently designated affordable housing, facilitating the installation of solar panels on their buildings, and making opportunities for their involvement in community solar projects. The PSD will subgrant awards to an administrator, which in turn will award funds as grants and low interest loans alongside other housing and energy resources to developers and property owners of subsidized housing projects. Leveraging affordable housing organizations' ability to coordinate these resources alongside other housing resources will efficiently target this hard-to-reach market with on-site installations including on multifamily rental housing and manufactured homes and community projects whose benefits are delivered to participants. MASH will facilitate approximately 10.27 MW of solar deployment and 4,162 tons of avoided greenhouse gas emissions across 8,000 participants.

The Affordable Community Renewable Energy (ACRE) 2.0 program will use $35 million to focus on MW-scale community solar arrays, providing low-income renters and homeowners who cannot participate in RAISE or MASH with an opportunity for long-term benefits from shares in these projects. Building upon the existing ACRE Program, funds would support the installation of larger scale projects (1 to 5 MW), with energy generated directed to recipients through a tariffed, discounted block of energy that reduces participants' bills. The participants will own a membership in the community array. Given the size and scale of the projects expected to be constructed under this portion of SAV, it is expected that ACRE 2.0 will reach the most Vermonters—approximately 6,000, with 13.3 MW constructed and 13,310 tons of greenhouse gas emissions avoided. Moreover, ACRE 2.0 is expected to create mechanisms for funds to be reinvested back into the program through a revolving fund that will create a multiplier effect for the investment that can extend the reach of SAV to more Vermonters in the future.

Collectively SAV programs will result in the construction of more than 30MW of distributed and community solar infrastructure, and the avoidance of 29,160 tons of greenhouse gas emissions, as well as other air pollutants. Annual household savings are estimated to range from about $325 to $350 per year, well over 20% of participant's electric bill. Beyond these direct benefits to participants, SAV will have a significant positive financial impact on some of Vermont's most vulnerable communities through the indirect spending caused by bill savings, and by accelerating job creation in the solar industry and among electrical contractors. Vermont leads the nation with the highest per capita employment rate in the clean energy industry with about 6% - almost 18,000 Vermonters – of the state's workforce being employed in the space. SAV will build on this foundation to increase the good-paying jobs in the clean energy sector.

Through the above comprehensive set of programs, this $100 million SAV proposal will lower low-income Vermonter's and disadvantaged communities' electric bills through an array of options that allow all Vermonters to better participate in the energy transition, while making significant reductions in greenhouse gases and other air pollutants.