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CLEAN ENERGY ADVISORY BOARD
2020 ANNUAL REPORT

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Executive Summary

In 2019 the Virginia General Assembly passed HB 2741 establishing the Clean Energy Advisory Board (the "Board") as an advisory board in the executive branch of the state government. The stated purpose of the Board is to establish a pilot program ("Program") for disbursing loans or rebates for the installation of solar energy infrastructure that will benefit low-income and moderate-income households through the "Low-to-Moderate Income Solar Loan and Rebate Fund" ("LMI Solar Loan and Rebate Fund"). The enabling legislation requires the Board to prepare and submit to the Governor and the General Assembly an annual report for publication as a report document, which shall include an executive summary of the interim activity and work of the Board.

With the recent passage of the Virginia Clean Economy Act ("VCEA") and Governor Ralph Northam's Clean Energy Virginia initiative, Virginia is on the path to fundamentally transform the state's electricity generation and grid. The Board's mission is to ensure that low-to-moderate income ("LMI") Virginians are not left behind in this energy transition.

Despite the obstacles referenced in this annual report, the Board has worked tirelessly in 2020 to explore and create a sustainable program which will expand cost-effective energy efficiency and solar energy opportunities to LMI communities across Virginia.

The Board has risen to the challenges of 2020. Despite working in a global pandemic and a socially distanced state of emergency, the Board and staff from the Virginia Department of Mines, Minerals and Energy (DMME) conducted national and state program research, participated in a regulatory rulemaking process at the State Corporation Commission (the "Commission"), adopted Bylaws to govern Board conduct (See Appendix A) and consulted with the Commonwealth's largest investor-owned utility, all with the goal of creating greater energy equity through solar for LMI customers in Virginia. While inequities existed before the pandemic, COVID-19 has exacerbated these issues, leaving an unprecedented number of utility customers with arrearages, and demonstrating the need to reduce high energy burdens. Solar energy technology, paired with energy efficiency measures, has been proven to reduce electricity expenses while also supporting clean energy goals. But the barriers for lower income customers to benefit from these opportunities remain. The Board is committed to launching a sustainable LMI Solar Loan and Rebate Fund to serve those who can benefit the greatest. We hope 2021

will bring additional opportunities to continue and expand our work as it has become even more important.

Mission Statement

The Board adopted the following mission statement in 2019 which guides the Board's work:

> *The Clean Energy Advisory Board (the Board) is established as an advisory board in the executive branch of state government. The Board, with the approval of the Director of the Department of Mines, Minerals and Energy (DMME), shall develop and establish a Low-to-Moderate Income Solar Loan and Rebate Pilot Program (the Program) and rules for the loan or rebate application process. The Program shall disburse loans or rebates for the installation of solar energy infrastructure from a Low-to-Moderate Income Solar Loan and Rebate Fund (the Fund). In carrying out its duties, the Board shall consider the Energy Objectives of the Commonwealth described in § 67-101 of the Code of Virginia. All actions and recommendations of the Board shall be for the purpose of expanding access to cost-effective clean energy for low- and moderate-income Virginians throughout the Commonwealth, including citizens living in both single- and multi-family housing facilities and in rural or economically disadvantaged communities.*

See Appendix B for the Section in the Code of Virginia which established the Board and the Fund.

Current Board Members (2019 - 2022)*

The General Assembly added two additional board seats in 2020 (HB 1707). Those seats remain unappointed at the time this report was written. In addition, there are four seats from the enabling legislation in 2019 (HB 2749) which remain unappointed. See Appendix C for additional board seat details.

- KC Bleile
- Taylor Brown
- Katharine Bond
- Janaka Casper
- Hannah Coman, Chair

- William Greenleaf, Vice Chair
- Susan Kruse
- Toni Ostrowski
- William Reisinger
- Samuel Towell
- John Warren *(ex officio)*

The following individuals were previously appointed and served for a short term before resigning for various reasons:

- Faith Harris
- Marcus Harris
- Gary Wood

**per the Virginia General Assembly website, as of 12/14/2020*

Public Meetings

The Board's first meeting of 2020 was held on February 12, 2020, and conducted in person. The rest of the Board's 2020 activities occurred during the COVID-19 State of Emergency. Executive Order Fifty-One, "Declaration of a State of Emergency Due to Novel Coronavirus (COVID-19)" was announced on March 12, 2020, and resulted in a delay for Board and Committee meetings for a significant amount of time during the second quarter of the year. However, public meetings of the Board and Committees were able to resume under updated public meetings guidance. Each meeting during this time was conducted electronically through virtual platforms such as Zoom,Webex and Google Meet. The Board had a total of seven meetings in 2020, in addition the Program Development Committee and the Stakeholder Engagement and Marketing Committee each met twice. Each meeting was publicly noticed through Virginia Town Hall and meeting materials were posted on DMME's public-facing website (found here). Meetings were recorded, and public meeting protocols were adhered to accordingly.

Guest Presentations

In addition to hearing input from members of the public, working with partner state agencies such as DHCD and Virginia Housing, DMME and members of the Board engaged in extensive conversations on LMI solar program design and development topics with subject matter experts from across the country, including *but not limited to* researchers, executives and program managers at: Clean Energy States Alliance (CESA), U.S. Department of Energy (DOE), Inclusive Prosperity Capital, Vermont Energy Investment Corporation (VEIC), Energy Trust of Oregon, Climate Access Fund, National Renewable Energy Lab (NREL), World Resources Institute (WRI), Lawrence Berkley National Labs, The Solar Foundation, Vote Solar, GRID Alternatives and Groundswell. Additionally, the Board hosted presentations from guest speakers including Nicole Steele, former Executive Director of GRID Alternatives Mid-Atlantic, and Shelley Cohen, Director of solar programs at the DC Sustainable Energy Utility, on the DC Solar For All program.

The Board and DMME will continue to look for opportunities to learn from individuals, agencies and organizations both within Virginia and from other states or regions that have information that can support the mission of the Board and the successful launch of the LMI Solar Loan and Rebate Fund.

2020 Legislative Actions and Policy Update

Energy policy in Virginia is complicated as it varies greatly in the Commonwealth based on the customer's location. The Commonwealth is divided into different utility territories, as shown in Appendix D, and depending on where a customer lives and which utility serves them, different opportunities for energy efficiency or renewable energy programs may be available. To complicate matters, the Commonwealth's energy policy has undergone significant changes in the last year. The General Assembly passed several bills during the Regular Session of the 2020 Virginia General Assembly that expanded renewable energy development in Virginia, including the Virginia Clean Economy Act ("VCEA") (House Bill 1526), the Solar Freedom Bill (House Bill 572), Shared Solar in Dominion Energy's ("Dominion") territory (House Bill 629) and

legislation to increase the Board's membership and repeal the sunset provision (House Bill 1707), among others.

The VCEA established a mandatory renewable portfolio standard ("RPS"). The RPS requires Dominion and Appalachian Power Company ("APCo") to obtain an increasing percentage of their electricity sales from renewable energy sources. The VCEA also requires Dominion to procure a certain percentage of its RPS energy from low-income qualifying projects. In particular, the law provides that 1% of Dominion's annual RPS compliance must be satisfied with RECs from distributed generation facilities and, moreover, that 25% of such distributed generation RECs should be obtained from "low-income qualifying projects." The Code defines low-income qualifying project as "a project that provides a minimum of 50 percent of the respective electric output to low-income utility customers." Code Section 56-576 defines "low-income utility customers" as "any person or household whose income is no more than 80 percent of the median income of the locality in which the customer resides." The Commission is evaluating Dominion's proposal to comply with its RPS obligations, including the low-income generation carveout, in a pending case. (SCC Case No. PUR-2020-00134). The VCEA also increased the availability of power purchase agreements (PPAs) in Dominion and APCo's territories, provided an exemption for LMI customers for PPAs sized 50 kw or less and made power purchase agreements available in Old Dominion Power's (ODP) territory for the first time, greatly expanding the opportunities for people to finance and afford solar facilities.

Virginia's net energy metering law was also amended in 2020. The Solar Freedom Bill expanded Virginia's cap on net energy metering from 1% to 6% of each utility's Virginia peak load. 1% of the available net metering capacity is reserved for "low-income utility customers." The Commission has proposed updated regulations to implement the revised net metering program, including the low-income carveout. (See SCC Case No. PUR-2020-00195).

The Solar Freedom Bill also established a program for Dominion and ODP customers living in multi-family housing to subscribe for a specific amount of electricity generated by a solar facility to offset their energy usage from their utility ("Multi-Family Shared Solar Program"). As discussed in more detail below, the Board actively participated and provided comments to the Commission regarding the proposed regulations for the Multi-Family Shared Solar Program. (SCC Case No. PUR-2020-00124; See Appendix F for the Board's filed comments).

The General Assembly also passed House Bill 629, allowing Dominion customers of all classes to subscribe for a specific amount of electricity generated by a solar facility to offset their energy usage from their utility (the "Shared Solar Program"). Pursuant to the legislation, the Commission must establish a minimum bill for all subscribers to pay, except for low-income customers; thereby providing important access to solar for low-income customers. As discussed in more detail below, the Board actively participated and provided comments to the Commission regarding the proposed regulations for the Shared Solar Program. (SCC Case No. PUR-2020-00125; See Appendix E for the Board's filed comments).

In a nod to the importance of the Board's work, the General Assembly passed House Bill 1707, which added two new Board members, one who shall have experience implementing LMI incentive and loan programs for distributed renewable energy resources and one who shall be an attorney who maintains a legal practice dedicated to rural development, rural electrification, and energy policy. The legislation also repealed the sunset provision for the Board, which was scheduled to expire on July 1, 2022.

Relative to the LMI Solar Loan and Rebate Fund's energy efficiency requirements, beginning in 2021 electric cooperatives may offer on-bill financing for energy efficiency and renewable energy, per Senate Bill 754. The program allows for customers of electric cooperatives to pay the costs of energy efficiency improvements and renewable energy from their energy savings.

Dominion also recently responded to directives from the General Assembly to propose solar incentive programs for certain qualifying residential customers. Legislation passed in 2019, House Bill 2789, directed Dominion to propose new energy efficiency and solar incentive programs for elderly, disabled, and low-income customers. On December 2, 2020, Dominion requested Commission approval to offer this program over a three-year period, from January 1, 2021 to January 1, 2024. "incentives to low income, elderly, disabled individuals, or veterans" that would allow such customers to install and operate solar equipment. Dominion has proposed a total project budget of $31 million, which would allow over 1,600 Virginia customers to participate. Dominion's solar proposal is currently pending before the Commission. (SCC Case No. PUR-2020-00274).

Household Energy Burdens in Virginia

Recent analysis of households using electric heat in Virginia showed 34,603 owner-occupied single family homes with an annual income of 80 percent or less of the area median income (AMI) and an energy burden of 11 percent or greater (See Appendix E). These low-to-moderate income households are using a significant amount of their income on energy and would be eligible for the LMI Solar Loan and Rebate Fund.

DMME conducted this analysis using the U.S. Department of Energy's Low-income Energy Affordability (LEAD) Tool (See Appendix D). The recommended percentage of energy expenditure to income ratio, or "energy burden," that should be considered affordable caps at 10 percent if a household is using electricity for heating, or 6 percent for households using non-electric heat such as gas, propane, or other fuels. When considering all single family households within the 0-80 percent AMI income levels, regardless of ownership or heat source, and an energy burden greater than 6 percent, Virginia's has over 665,000 households, averaging $2,375 in energy costs, or $197 per month. Furthermore, over 1 million housing units in Virginia are at or below the 80 percent of AMI.

Electric bills are higher for LMI single-family homeowners than state averages for a variety of reasons. Again, according to DMME analysis using the LEAD tool, households under 80 percent AMI are paying a higher average electricity bill than overall averages as seen in Dominion or APCo service territories. Average electric monthly bills in Dominion territory are $115 per month, and $110 per month in APCo. Conversely, LMI single family households see the following average electricity bills, by income:

- AMI 60-80% = $1,625 ($135.42/month)
- AMI 30-60% = $1,538 ($128.17/month)
- AMI 0-30% = $1,530 ($128/month)

Numerous programs in Virginia are working to reduce energy burdens for LMI customers based on the new policy landscape in 2020, bringing more options for state agencies to create energy equity. DMME and members of the Board will work with the Department of Housing and Community Development (DHCD) and other related agencies and utilities to set up programs that have this mission in common, for example: funding for low-income affordable housing energy efficiency through access to revenues from carbon trading (RGGI); the Percentage of

Income Payment Program ("PIPP")[1]; access to Shared Solar and Multi-family Shared Solar subscription programs; and investor-owned utility LMI solar and energy efficiency programs, as ordered through HB 2789.

The numbers referenced in the LEAD tool will likely increase in the short term as data points get updated through the Census Bureau's American Community Survey, capturing the harsh economic reality facing millions of American households who have felt the recent COVID-19 crisis in the form of lost jobs and other economic related disparities.

Underlying this more recent crisis lies systemic inequities resulting from hundreds of years of disparities. The country at large faces challenging inequities in historically economically disadvantaged communities ("HEDCs"), which in Virginia include communities of color, communities in fossil fuel impacted regions such as Southwest Virginia's coalfield region of Appalachia, veteran communities, native communities, and of course low-income communities.

While the Board's work on this LMI Solar Loan and Rebate Fund will be structured on the basis of income, there is broad recognition from DMME and the Board alike that solutions for the clean energy transition must benefit all Virginians. To do so, innovative policy, financing and technical solutions must come together with community based engagement to solve current barriers to create an equitable and flourishing future for all.

Funding and Technical Assistance Opportunities

While the LMI Solar Loan and Rebate Fund does not yet have a sustainable source of revenue to allocate toward low-to-moderate income solar financing projects, the Board and DMME have identified numerous opportunities for funding and technical assistance. As a member of the Clean Energy States Alliance ("CESA"), DMME has regular opportunities to learn how similar programs in other states have structured the financing process. DMME and CESA are engaged in multiple projects to source seed funding and technical assistance to build out a proof of concept for how the LMI Solar Loan and Rebate Fund structure could work in Virginia.

[1] This is a new program established by the Virginia Clean Economy Act that will cap the monthly electric utility payment of low-income participants at six percent or, if the participant's home uses electric heat, 10 percent, of the participant's household income.

In addition, DMME has received approval to access a small amount of legacy ARRA funding in the form of revolving loan funds that have cycled back to DMME following the American Reinvestment and Recovery Act (federal stimulus dollars from the 2009 administration). While some of these sources will allow for the startup of the LMI Solar Loan and Rebate Fund, demonstrating how the program could be structured, none of these sources together are sufficient to successfully launch and market the LMI Solar Loan and Rebate Fund, nor to meet the need of communities across the Commonwealth.

A future budget allocation would assist the Board and DMME in carrying out its mission.

Program Development Committee

Activities

The Board agreed during its regular quarterly meeting on February 12, 2020, to form two standing committees: a Program Development Committee and Stakeholder Engagement Committee, both to streamline coordination and allow Board members to provide expertise in smaller forums more conducive to detailed discussion.

Members of the Program Development Committee ("Program Committee") include KC Bleile of Viridiant, Janaka Casper of Community Housing Partners (CHP), Toni Ostrowski of Virginia Housing, and Bill Greenleaf of Virginia Community Capital. Bill Greenleaf agreed to chair the Program Committee.

In keeping with the COVID-19 State of Emergency, the Program Committee held virtual public meetings twice during 2020, on Aug. 6th and on Sept. 22nd. Minutes and recordings are available at DMME's website for the Board (found here).

Outcomes

Funding

As of this report, obtaining funding for the LMI Solar Loan and Rebate Fund remains a key issue.

Through CESA, DMME participates in the LMI Solar Working Group where technical support and case studies are shared. In addition to this technical support, there is an opportunity to obtain $50,000 in direct funding for setting up an LMI solar financing program. Additionally, CESA is submitting a grant proposal to the Oak Hill Foundation to support DMME's implementation of the program in Virginia.

DMME staff spoke to Executive Directors of the Coalition for Green Capital (a group promoting Green Banks) and Maryland's non-profit Climate Access Fund about potential funding models that would rely on private "impact" investors. Climate Access Fund has been able to leverage private investment for community/shared solar projects that will benefit low-to-moderate income households once the projects have been developed and subscribers can be enrolled, which is expected to occur over the next 2-3 years. The Committee also discussed the potential use of RGGI funds as a source of funding, and several Program Development Committee members are engaged in DHCD's stakeholder process relating to this new program.

Financial Models

DMME staff produced estimates of value of electricity using the National Renewable Energy Laboratory's (NREL) PV Watts online tool, for 4kW-6kW systems installed in two locations (Roanoke and Richmond). This analysis showed that in order to make an installation of up to 6kW system cash flow positive for the customer, a substantial partial or full subsidy of the system cost would need to be provided. If a partial subsidy is provided, a low interest loan for the remaining balance could be viable. Loan-only programs (even with interest rate buy-down to 0%) would have the customer paying more out-of-pocket because the project would not be cash flow positive until the loan was paid off.

Through CESA, the North Carolina Clean Technology Center also modeled small PV system costs and outputs in three distinct locations and different utility service territories in Virginia. This data will also be helpful in determining how the program can best be structured to be advantageous to LMI customers.

> Loans: The Program Committee discussed that there are several advantages to loan programs from a program administration standpoint (such as: bank provides the capital; is responsible for income verification and loan servicing), however there are a number of challenges that limit their effectiveness. The conclusion, which was confirmed through stakeholder outreach to solar installers and Weatherization Assistance Program (WAP)

providers, is that even if the interest rate is subsidized to 0%, it is unlikely to generate much uptake because low-to-moderate income customers may not wish to take on more debt, particularly during the COVID-19 associated economic downturn, and the system does not become cash flow positive for the customer until the loan is fully paid off (in other words, the energy generated by the PV system will not offset the loan payments).

Rebates and Incentives: From the Board's research and conversations with several low-to-moderate income solar program implementers, the Program Committee has learned a potential drawback to a direct incentive to the customer is adverse tax implication. For example, if the program provided a $12,000 incentive directly to the customer this would have to be reported as income for purposes of federal and state income taxes, and could lead to increased income tax liability. A rebate program would require the customer to purchase the system first, then apply for a rebate. The general understanding is that low-to-moderate income customers would not likely have cash on hand to purchase a system in the first place, which limits feasibility of this option. There is potential a "voucher" type incentive could overcome these issues, similar to electric vehicle "on the hood" incentives that immediately reduce the cost burden.

Another potential model could be to have the program provide funds through contracts with solar installers, who would agree to install the systems on behalf of the customers. There would be some administrative costs for the installers, so not all costs would go directly to the cost of the system, but this avoids the potential tax implications to the customer.

Customer Eligibility

The Program Committee extensively discussed how to determine customer eligibility for the program, in particular looking at the energy efficiency 12% reduction pre-requisite, as required by the Board's enabling legislation. Questions were raised if the target market for the program is retrofits or new construction/substantial renovation projects. Other issues to resolve is how far back a completed weatherization project can go and still qualify (*e.g.*, five year, ten years, etc.)

Verifying income is another substantive issue. It is generally thought that relying on other income-qualified programs as a proxy qualification process makes sense and avoids unneeded duplication of efforts on income verification, however, many of the affiliated programs in this space cap at the 60% of AMI (or state median income, "SMI") and therefore would not cover the 60-80% range that is included in this program. In essence, a menu of options should be

considered for eligibility, similar to recommendations made by the Board to the State Corporation Commission for verifying Shared Solar eligibility.

Low-income Weatherization Assistance Program (WAP) eligibility

WAP income guidelines follow the state Low-Income Heating Assistance Program (LIHEAP) limit of at or below 60% of SMI for households of seven or less; 200% of Federal Poverty Level (FPL) if household is larger than seven.

DMME recommends using WAP program audits and final work scopes with a Savings to Investment Ratio (SIR) of greater than 1.0 for energy efficiency measures as a proxy for the 12% reduction in energy consumption required in the Virginia Code to qualify WAP customers for eligibility under the LMI Solar Loan and Rebate program. A reasonable interpretation of the Virginia Code allows for a reduction to be measured in terms of dollar cost savings, so that both electric and fuel savings can be included and stated as a single metric. Coordination would need to occur between DMME, WAP providers and solar installers to ensure customer qualifies and home or building meets SIR minimum requirement. Program Committee members continue to work to best determine how this could apply to customers who are ineligible for WAP program benefits.

Moderate income eligibility

The statute requires eligibility for all Virginians with incomes up to 80% of AMI or SMI, whichever is greater. This is the same eligibility requirement as home buyer qualifications of Virginia Housing's Acquire, Renovate, Sell (ARS) program.

Through the ARS program, an undervalued home may be purchased by a developer, renovated and updated to be occupied by first-time homebuyers. Virginia Housing may provide down payment assistance, and reduced-rate mortgages to assist first-time buyers in acquiring these homes.

The recommendation is to use the Home Energy Rating System (HERS) index, pre- and post-retrofit, as conducted by a qualified HERS Rater to determine eligibility. Similar to the WAP audit, the Rater will conduct a pre-retrofit evaluation. This will include evaluation of the existing energy components (HVAC, insulation, lighting, appliances, etc.) may include performance testing, such as using a blower door test to determine the envelope air-leakage rate in the home. After renovation, the Rater will conduct a final inspection and test to

determine how much energy efficiency improvement is expected based on energy modeling. For example, if the home's HERS index is 150 pre-renovation and 100 post-renovation, this shows a 50% reduction in projected annual energy cost and would qualify the customer for participation in the LMI Solar Loan and Rebate program.

For new construction and substantial renovations, the Home Energy Rating System (HERS) index (as determined by a credentialed HERS Rater) provides a straightforward pathway to determine if the home will meet the 12 percent energy consumption reduction, as required in § 45.1-399 of the code.

Program Design Options

Demonstration project: DMME proposed funding installation of PV systems on a small number (less than 20) of low-income owner-occupied single-family homes (that had received WAP services and were on bill-assistance) using existing federal funds (See Appendix F). The purpose was to establish baseline current project costs for small systems (6 kW or smaller), identify customer acquisition barriers and pathways, and surface other potential issues that could inhibit getting the program to scale (such as structural issues with roofs). While DMME initially projected that up to $500,000 would be available, due to competing demands on a limited pool of funds available, funding was closer to $200,000, which was not sufficient to provide for a project at necessary scale to have impact, unless matched with other funding needed to support a demonstration project.

PPA proof of concept: Given the smaller scale of federal funds available, and with passage of the Virginia Clean Economy Act (VCEA) which allows for Power Purchase Agreements (PPAs) for smaller (less than 50 kW) systems for low-income customers, the Program Committee considered a competitive RFP that would encourage solar installers to develop a PPA offering for LMI customers in Virginia. The Program Committee was generally supportive of a PPA pilot at the conclusion of the September 22, 2020 call.

Availability of Solar Leases: Leases are an option in many other state programs (*e.g.*, Connecticut) and the Board and DMME are looking into the availability in Virginia.

Related program developments

The Board and Program Committee members are monitoring Dominion's progress on developing a low-income solar program as required by HB 2789. Dominion will invest up to $25 million in a low-income solar program for customers in its service territory. Dominion refers to the solar program as Component 2, which will be rolled out after Component 1, which is focused on HVAC and other health and safety repairs. Component 2 solar program is to be submitted to the SCC for review in December 2020. Depending on the Commission's determination, Dominion intends to offer a full subsidy of the systems for qualifying customers, with a standardized 3kW rooftop system being the available equipment.

Due to this large investment in low-income solar in Dominion's territory (and presumably forthcoming in APCo territory in the near future), a recommendation may be that the Board and Program Committee avoid overlap and consider offering a program to customers in co-op and municipal utility territories. Given available funding, a PPA pilot may be the best option initially, while the Board and DMME determine the best opportunities to obtain additional funding. All the parties of such arrangement would still need to be determined.

Stakeholder Engagement and Marketing Committee

Activities

The Stakeholder Engagement Committee (the "Stakeholder Committee") was also established on February 12, 2020 by the Board. Members of the Stakeholder Committee include Hannah Coman of Apex Clean Energy, Susan Kruse of Community Climate Collaborative, Katherine Bond of Dominion Energy, and Will Reisinger of ReisingerGooch, PLC, and Samuel Towell of the Office of Attorney General. Hannah Coman agreed to chair the Stakeholder Committee.

In keeping with the COVID-19 State of Emergency, the Stakeholder Committee held virtual public meetings twice during 2020, on September 4th and on September 25th. Minutes and recordings are available at:
https://www.dmme.virginia.gov/de/CleanEnergyAdvisoryBoard2019.shtml

Outcomes

Mapping Stakeholder Engagement

The first order of business for the Stakeholder Committee was to identify groups of stakeholders whose input would be critical to program design and implementation. At the September 25th committee meeting, Carrie Hearne presented a stakeholder engagement map and received input from the committee for organizations that should be added or edited on the chart. See Appendix G for the current version of this map. A larger format version of the file can be found on DMME's website for the Board.

The identified groups included: Weatherization Providers, Solar Industry Representatives, Banks and Financial Institutions, Utility Companies, Historically Disadvantaged Communities, Environmental Justice and Anti-Poverty Organizations, Conservation and Clean Energy Organizations, Legal Aid Organizations, State Government, Affordable Housing Organizations, 3rd Party Program Administrators, Higher-Education Institutions and Workforce Development, and National Research Networks. The Stakeholder Map is a living document and is updated regularly in Stakeholder Committee meetings.

Best Practices for Stakeholder Engagement

The Stakeholder Committee sought out the expertise of other successful programs in other states to learn best practices for stakeholder engagement. DMME staff connected with the Oregon Inclusive Innovation Project, which developed an equitable stakeholder engagement process for the development of Oregon's LMI Solar Program.

Coman and Kruse and DMME staff attended a call with Energy Trust of Oregon and partners to learn more about their innovative (and award winning) stakeholder process and community solar grant programs. DMME staff presented the results of this call and other research to the Stakeholder Committee. Information from this research informed 2020 stakeholder engagement by the Board and will be used as engagement continues in 2021.

Low-to-Moderate Income Household Distribution Analysis

The Stakeholder Committee also reviewed data from the U.S. Department of Energy Low-Income Energy Affordability Data (LEAD) Tool, which was compiled by Carrie Hearne, DMME. The data compiled includes energy burden (% of income spent on energy costs), total energy cost, LMI housing counts, energy type, housing type, ownership and location. The broad geographic distribution of energy burden highlighted gaps in current Board member connections

and stakeholder engagement. To address this disparity, the Stakeholder Committee reached out to the Legal Services Corporation of Virginia (LSCV) which provides free legal services to every part of the Commonwealth. The Stakeholder Committee hopes to partner with LSCV to distribute engagement surveys to potential program beneficiaries, which will be created in 2021.

Stakeholder Engagement

At DMME's recommendation, two stakeholder engagement listening sessions were conducted with industry representatives, facilitated by staff at DMME. The Stakeholder Committee provided input on the questions and stakeholder invitation list, and DMME held the meetings on October 27th and 28th. The meeting on the 27th included representatives from the residential rooftop solar industry and the meeting on the 28th included weatherization partners for the state Weatherization Assistance Program (WAP). Rachel Smucker of MDV-SEIA helped advertise the solar industry meeting, and Billy Weitzenfeld of AECP (Association of Energy Conservation Professionals) helped advertise the weatherization listening session.

Additional stakeholder engagement will occur in 2021, including outreach and engagement with financial entities, community-based service organizations, low-to-moderate income communities, and other related stakeholders.

Similar to the Board, the Stakeholder Committee's initial plans were impeded due to the inability to conduct public meetings during the first few months of the state of emergency, which delayed the beginnings of strategic stakeholder engagement planning and outreach. The Stakeholder Committee (and the Board) also appreciates the significant economic and health crisis that is directly impacting community-based organizations and low-income communities disproportionately. While the timing and format will need to be planned carefully to respect the capacity of these individuals and organizations as well as adapt to comply with any restrictions, the Stakeholder Committee desires to embark upon an authentic and meaningful engagement process to hear directly from eligible program beneficiaries to learn what is most important for their household and community. The Stakeholder Committee also supports a rapid deployment of clean energy solutions that could quickly lower energy bills for those who need it most.

Shared Solar Rulemaking, Comments to the Commission

Many residential and non-residential electricity customers face significant challenges to installing rooftop solar including: up-front and maintenance costs of the system; suboptimal roof orientation or structural constraints; and shading from trees or other buildings. For renters, residents of multifamily buildings, and low-to-moderate income customers, shared solar programs address these obstacles and offer customers the opportunity to invest in solar in a way that fits their budgets, and derive some of the benefits (such as lowering monthly electric bills and energy burdens), while a third-party is responsible for building and maintaining the solar facility and ensuring the benefits are attributed to participating customers.

As a result, it is essential that the regulations for the Shared Solar Program and the Multi-Family Shared Solar Program are drafted to allow low-to-moderate income customers to easily participate. The Board submitted comments to the Commission in both the Shared Solar Program and the Multi-Family Shared Solar Program focusing on the issues that most directly impact low-to-moderate income customers.

The Board submitted comments on July 24, 2020 for both Shared Solar and Multi-Family Shared Solar emphasizing the lessons learned in other states in similar programs and the best practices the Commission should adopt. The Board stressed that in developing these regulations the Commission does not have to reinvent the wheel because many other states have already established similar, successful projects.

On September 21, 2020 the Commission Staff issued proposed regulations for both the Shared Solar Program and the Multi-Family Shared Solar Program. In both cases these proposed regulations did not fully address many of the issues that the Board had highlighted in the Board's July comments.

The Board submitted comments on the Commission's proposed regulations on November 2, 2020. Again, the Board focused on the issues that most directly impact low-to-moderate income customers. A few of the issues the Board highlighted in the Shared Solar Program were that the proposed regulations did not provide guidance on low-to-moderate income eligibility verification, did not create a stakeholder working group as required by the Shared Solar Program statute, did not include a mechanism to ensure low-to-moderate income customer participation, and did not specify requirements or approval process for low-to-moderate income subscription plans. In the

Multi-Family Shared Solar Program the Board highlighted certain provisions that would prevent the program from economically benefiting customers.

Commission Staff invited representatives of the Board as well as other commenters to participate in a virtual stakeholder meeting on November 16, 2020. The virtual stakeholder meeting was a unique opportunity to discuss these issues with Commission Staff directly and the Board was very grateful for the opportunity to participate.

The Commission Staff published its report, including new proposed regulations, on November 23, 2020. The new proposed regulations adequately address many of the issues the Board highlighted in its comments, but also suggests that many of these issues be addressed in the future through a stakeholder working group. The Board hopes that the Commission will promptly create a stakeholder working group regarding low-income participation following the finalization of the regulations. The Board hopes to actively participate in any future opportunities to help establish successful shared solar programs.

See Appendix H (Shared Solar Program) and I (Multi-Family Shared Solar Program) for copies of what the Board submitted to the Commission on July 24, 2020 and November 2, 2020.

Investor Owned Utility Consultation

Section 4 of the VCEA states: “That each investor-owned utility shall consult with the Clean Energy Advisory Board established by Chapter 554 of the acts of Assembly of 2019 in how best to inform low-income customers of opportunities to lower electric bills through access to solar energy.” This requirement from the VCEA provides the Board with a unique opportunity to engage with all of the investor-owned utilities. To this end, in August of 2020 the Board Chair reached out to each investor-owned utility in the Commonwealth to discuss how best to satisfy this new requirement.

It is essential that the members of the Board understand each investor-owned utility’s offerings and plans so that (i) the Board can create a program that does not reinvent the wheel but can plug and play with the existing programs and (ii) so the Board can provide feedback and satisfy the requirement under the VCEA. The Board understands “consult” to imply a two-way

conversation, which can only occur if the Board understands the investor-owned utility's current solar offerings and future plans. The Board expects this to be an annual consultation.

The Board invited each investor-owned utility, Dominion, APCo and ODP, to present to the Board on each utility's current offerings. The Board held a meeting to consult with Dominion on November 10th, 2020, but due to timing constraints the Board plans to hold its first consultation with APCo and ODP in 2021. The dates of these meetings have not yet been set.

The Board and Dominion agreed to an agenda for the consultation that included updates from Dominion on energy efficiency and grid transformation, including the impact on and outreach to low-to-moderate income customers. Dominion answered many questions from the Board on outreach, engagement and eligibility of low-to-moderate income customers in the Energy Share program and the IAQHI program. Dominion then provided a legislative recap and next steps on energy conservation measures and solar energy equipment pursuant to Virginia Code Section 56-596.2:1 (HB 2789, 2019) as well as Dominion's plans for its Phase 9 IAQ Program. The Board and Dominion had a robust conversation regarding eligibility for HB 2789 and specifically how renters could be included in the program. Following Dominion's presentation, the Board and Dominion discussed how best to engage customers, especially low-income customers, regarding how they use energy now and in the future. In addition, the group had a brief discussion regarding property tax implications from solar and how the differences in tax treatment of solar by the localities may impact solar adoption.

The Board expressed a strong interest in working with Dominion on how best to engage with customers regarding the Shared Solar and Multi-Family Shared Solar Programs. The Board also offered to provide a summary of best practices from other states on marketing and educational documents for potential solar customers, specifically low-income customers. Dominion stated that receiving this information and research would be helpful.

The Board's consultation with Dominion was very productive and informative. The Board looks forward to participating with Dominion on its future programs that enable low-income customers of opportunities to lower electric bills through access to solar energy.

Key Outcomes

The following is an overview of the general activities of the Board and DMME relating to operations and activities of the Board and structuring of the LMI Solar Loan and Rebate Fund:

- Created Board committee structure;
- Adopted Bylaws;
- Completed Virginia-specific research on state agency programs (WAP, LIHEAP, etc) and state regulatory framework/policies to inform the Board's work;
- Completed National research on similar LMI solar program design and best practices:
    - income verification options and cautions,
    - engagement with community based organizations and LMI Communities,
    - financing options: solar leases; power purchase agreements; low-interest loans; grants; rebates; shared solar ("community solar") subscriptions;
- Reviewed a DMME Demonstration Project Proposal using ARRA funding (subject to DMME approval);
- Completed energy burden analysis using U.S. DOE's LEAD tool:
    - presentation from Community Climate Collaborative on Charlottesville area analysis and
    - DMME's Virginia analysis;
- Submitted comments to the Commission in the Multi-Family Shared Solar docket and the Shared Solar docket in July 2020 and November 2020, and participated in the listening session facilitated by the Commission staff;
- Began a stakeholder engagement process:
    - created an organization map to guide engagement and
    - DMME held listening sessions with representatives from the solar and weatherization industries; and
- Consulted with Dominion as required in the VCEA and invited APCo and ODP to consult with the Board in 2021.

Current Challenges and Barriers

The Board and DMME have identified the following specific challenges and barriers to launching the LMI Solar Loan and Rebate Fund:

- Lack of sustainable funding for the LMI Solar Loan and Rebate Fund;

- Uncertainty regarding Virginia's market and pricing for Solar Renewable Energy Credits (SRECs);
- Tax incentives such as the Federal Investment Tax Credit (ITC) do not apply to low income households that do not have a tax burden so would need to be monetized in another way, such as through a solar developer;
- Potential tax implications for LMI customers receiving large grants directly;
- Nascent market for residential Power Purchase Agreements for LMI customers in Virginia;
- LIHEAP funds are not able to be allocated to solar without a state requesting an exemption from the US DOE and having such request granted (*e.g.*, Colorado);
- Eligibility for existing energy efficiency programs, such as the Weatherization Assistance Program (WAP), is limited to customers with a household income less than 60% of AMI, and as a result it is uncertain how to fund the required energy efficiency reduction for customers with a household income between 60-80% of AMI;
- On-site construction conditions on customer's homes may not be sufficient to withstand solar, *e.g.* roof structure, electric service; and
- 35% of the Board's membership remains unappointed, which results in a knowledge gap on the Board.

Next Steps and 2021 Goals

The Board is committed to launching a sustainable LMI Solar Loan and Rebate Fund to serve those who can benefit the greatest. Over the next year we plan to make substantial progress to achieving this goal.

In the next year the Board aims to accomplish the following:

- Conduct consultations with ODP and APCo as required by the VCEA and continue ongoing conversations with Dominion.
- Participate in Commission stakeholder engagement meetings, specifically the stakeholder working group for the Shared Solar Program, which will include low-income community representatives and community solar providers to facilitate low-income customer and low-income service organization participation in the program.

- Continue stakeholder engagement, such as direct outreach to community-based organizations and LMI program beneficiaries even if in-person meeting restrictions exist. The Board is committed to finding new ways to engage with beneficiary communities the LMI Solar and Loan Rebate Fund will serve.
- Define how 12% energy efficiency should be determined and/or evaluated both through the Program Committee and a pilot program.
- Determine funding source(s) for the LMI Solar Loan and Rebate Fund. As part of this the Board will evaluate the following potential funding sources:
    - Virginia state budget;
    - DHCD RGGI funds;
    - DMME ARRA funds or other DMME funding sources;
    - Virginia Housing funding sources; and/or
    - Creation of a Green Bank.

We hope 2021 will bring additional opportunities to continue and expand our work as it has become even more important.

Recommendations for the House, Senate and Governor's Office

Solar energy technology, paired with energy efficiency measures, is a proven solution to reduce energy expenses while supporting clean economy goals. The COVID-19 pandemic has exposed and amplified the inequities in our society, leaving an unprecedented number of utility customers with arrearages, and demonstrating the need to reduce high energy burdens. The Board's mission to ensure that low-to-moderate income Virginians are included in Virginia's energy transition is now more important than ever.

In order for the Board to be successful and accomplish the task set forth in the Board's enabling legislation, the Board will need the cooperation and support of the General Assembly and the Governor's Office. The Board respectfully makes the following recommendations:

- To ensure that the Board has all the expertise as envisioned for the membership, the Board recommends that the House and Senate finalize its appointments to the Board.

- To ensure that the Board can accomplish its duties set forth in the Board's enabling legislation, the Board requests the House, Senate and Governor to authorize a budget allocation to DMME to support the launch of the LMI Solar Loan and Rebate Fund.
- To ensure that the Board can create a program to expand access to low-to-moderate income customers throughout Virginia, the Board requests the House, Senate and Governor to address policy barriers to solar expansion, such as by establishing a SREC market to create economic certainty for the solar industry and/or establishing a Green Bank.

Appendix A: VIRGINIA CLEAN ENERGY ADVISORY BOARD BYLAWS

ARTICLE I. APPLICABILITY

Section 1. General.

The provisions of these Bylaws are applicable to all proceedings of the Virginia Clean Energy Advisory Board (the Board) to the extent that the same are not inconsistent with the Code of Virginia or Executive Orders applicable to these proceedings. Whenever the provisions of these Bylaws are in conflict with the provisions of the Code of Virginia or an applicable Executive Order, the latter shall control.

Section 2. Board and Limitations.

The Board is constituted under § 45.1-395 of the Code of Virginia as an advisory board in the executive branch of the Commonwealth of Virginia. The Board is specifically charged with the duties and responsibilities set forth in Title 45.1, Chapter 27, of the Code of Virginia, primarily for the purpose of establishing, with the approval of the Director of the Department of Mines, Minerals and Energy (DMME), a pilot program for disbursing loans or rebates for the installation of solar energy infrastructure in low-income and moderate-income households.

ARTICLE II. MEMBERS AND STAFF

Section 1. Appointment of Members; Terms; Vacancies.

All appointments shall be in accordance with § 45.1-396 of the Code of Virginia. Any ex officio members of the Board shall serve a term coincident with his or her term of office. Nonlegislative citizen members of the Board shall be appointed for a term of three years. Appointments to fill vacancies, other than by expiration of a term, shall be for the unexpired terms. Any appointment to fill a vacancy shall be made in the same manner as the original appointment. All members may be reappointed.

Section 2. Election of Chair and Vice-Chair.

The Board shall elect from its membership a Chair and Vice-Chair, both of whom shall serve in such capacities at the pleasure of the Board.

Vacancies in the position of Chair or Vice-Chair shall be filled for the remainder of the term by voice vote or roll call vote of the Board at the next meeting following the occurrence of the vacancy.

Section 3. Board Requests for Staff Assistance.

DMME staff shall serve as staff to the Board.

Any Board member may request assistance from staff provided the request has been coordinated through the Chair or Vice-Chair of the Board.

ARTICLE III. MEETINGS

Section 1. Regular Meetings.

Meetings of the Board shall be held at the call of the Chair or whenever a majority of the members so request, at such time and place as the Board may determine. No business requiring a vote or final decision of the Board may be conducted in the absence of a quorum, as defined below.

Section 2. Annual Meetings.

The last regular meeting of the calendar year shall be designated as an annual meeting. Elections of officers shall be held at the Annual Meeting.

Section 3. Committee Meetings.

The Board may establish standing committees consisting of at least five members of the Board from time to time as needed to carry out the work of the Board.

Section 4. Compliance with FOIA.

All meetings of the Board or a Committee of the Board shall be noticed and conducted in conformance with The Virginia Freedom of Information Act, Title 2.2, Ch. 37 of the Code of Virginia.

Section 5. Quorum.

For any meeting of the Board, a majority of the members of the Board shall constitute a quorum. If a quorum has not been achieved, the meeting of the Board may proceed; provided, however, that voting on matters before the Board shall be postponed until a meeting of the Board at which a quorum is present.

Section 6. Conduct of Meetings.

The Chair of the Board shall conduct the meetings of the Board and shall rule on the interpretation and application of the Virginia Code and these by-laws.

The Vice-Chair of the Board shall preside over meetings of the Board in the absence of the Chair. In the event that neither the Chair nor the Vice-Chair of the Board shall be in attendance at a meeting where a quorum is nonetheless present, any member of the Board may call the meeting to order, and the members present shall elect a Chair *pro tempore* to preside over the meeting. Where a quorum is not present, a vote of the majority of those members present shall determine the Chair *pro tempore*.

All actions and decisions of the Board shall be made upon the motion of a member, duly seconded by another member and approved by a majority of the members who are present and voting.

The Chair shall put the question submitted to the Board for a voice vote and shall call for a vote only after determining that there are no more Board members who wish to speak or upon approval of a motion to close debate.

Any member who may not participate in the Board's consideration of a matter under the State and Local Government Conflict of Interests Act, § 2.2-3100 *et seq*. of the Code of Virginia, must comply with the disclosure requirements of the Act and not participate in the discussion or vote on the matter.

If it appears to the Chair, upon the voice vote being taken, that the members of the Board are divided on any question, the Chair shall determine the vote of the members by roll call. A tie vote on any matter defeats the motion or issue upon which the vote is taken. At the conclusion of the vote on the motion, the Chair shall announce whether the motion has been adopted or defeated.

Section 7. Agenda.

The proposed agenda for any meeting shall be determined by the Chair in consultation with staff. In addition, any members of the Board may suggest items to be included on the agenda.

The agenda for regular meetings of the Board will normally include the following: (1) review and approval of the last minutes of the Board; (2) a status report on the work plan and action items agreed to by the Board; and (3) other information of interest to the Board.

An opportunity shall be provided at each meeting of the Board for public comment. Any person who desires to speak will be asked to provide his or her name and the matter to be addressed prior to each meeting at which the public is able to comment.

Section 8. Amendments.

The bylaws of the Board may be amended at any regular meeting of the Board at which a quorum is present by a majority vote.

Section 9. Rules of Order.

Informal rules of order shall govern all matters of procedure unless objected to by any Board member. If such an objection occurs, then “Robert’s Rules of Order, Newly Revised” shall be the parliamentary authority for all matters of procedure not specifically covered by these bylaws.

Adopted by the Board on June 23, 2020.

Appendix B: Clean Energy Advisory Board Statute, Code of Virginia

Code of Virginia Title 45.1. Mines and Mining. Chapter 27. Clean Energy Advisory Board[2].

§ 45.1-395. Clean Energy Advisory Board; purpose.

The Clean Energy Advisory Board (the Board) is established as an advisory board in the executive branch of state government. The purpose of the Board is to establish a pilot program for disbursing loans or rebates for the installation of solar energy infrastructure in low-income and moderate-income households.

2019, c. 554.

§ 45.1-396. Membership; terms; quorum; meetings.

The Board shall have a total membership of 17 members that shall consist of 16 nonlegislative citizen members and one ex officio member. Members may reside within or without the Commonwealth. Nonlegislative citizen members shall be appointed as follows:

1. Six nonlegislative citizen members to be appointed by the Speaker of the House of Delegates upon consideration of the recommendations of the Board of Directors of the Maryland-DC-Delaware-Virginia Solar Energy Industries Association (the MDV-SEIA Board) and the Governor's Advisory Council on Environmental Justice (the Council), one of whom shall be a designee of the Virginia Housing Development Authority, created pursuant to the provisions of Chapter 1.2 (§ 36-55.24 et seq.) of Title 36; one of whom shall be a rooftop solar energy professional or employer or representative of rooftop solar energy professionals; one of whom shall be a current or former member of the Council; one of whom shall be a member or representative of the Virginia, Maryland and Delaware Association of Electric Cooperatives (VMDAEC); one of whom shall be an expert with experience developing low-income or moderate-income incentive and loan programs for distributed renewable energy resources; and one of whom shall be an attorney who is licensed to practice in the Commonwealth and maintains a legal practice dedicated to rural development, rural electrification, and energy policy;

2. Three nonlegislative citizen members to be appointed by the Senate Committee on Rules upon consideration of the recommendations of the MDV-SEIA Board, one of whom shall be a solar energy professional or employer or representative of solar energy professionals, one of

[2] https://law.lis.virginia.gov/vacodefull/title45.1/chapter27/

whom shall work for or with a Virginia-based investor-owned electric utility company, and one of whom shall be a member or representative of VMDAEC; and

3. Seven nonlegislative citizen members to be appointed by the Governor upon consideration of the recommendations of the MDV-SEIA Board and the Council and subject to confirmation by the General Assembly, one of whom shall be an attorney who is licensed to practice in the Commonwealth and maintains a legal practice in renewable energy law and transactions, one of whom shall be an attorney who is licensed to practice in the Commonwealth and specializes in tax law and energy transactions, one of whom shall be an attorney with the Division of Consumer Counsel created pursuant to the provisions of § 2.2-517, one of whom shall be an employee of a community development financial institution who specializes in impact investing, one of whom shall be a member of a Virginia environmental organization, and two of whom shall be designees of the Department of Housing and Community Development, created pursuant to the provisions of Chapter 8 (§ 36-131 et seq.) of Title 36.

The Director or his designee shall serve ex officio with voting privileges and shall assist in convening the meetings of the Board.

Nonlegislative citizen members of the Board shall be citizens of the Commonwealth. The ex officio member of the Board shall serve a term coincident with his term of office. Nonlegislative citizen members shall be appointed for a term of three years. Appointments to fill vacancies, other than by expiration of a term, shall be for the unexpired terms. Vacancies shall be filled in the same manner as the original appointments. All members may be reappointed.

The Board shall elect a chairman and vice-chairman from among its membership. A majority of the members shall constitute a quorum. The meetings of the Board shall be held at the call of the chairman or whenever the majority of the members so request.

2019, c. 554; 2020, c. 803.

§ 45.1-397. Powers and duties of the Board; report.

The Board shall have the following powers and duties:

1. To advise the Director on the management of the Low-to-Moderate Income Solar Loan and Rebate Fund (the Fund) pursuant to the provisions of § 45.1-398;

2. To develop, establish, and operate, with the approval of the Director, a Low-to-Moderate Income Solar Loan and Rebate Pilot Program (the Program) pursuant to the provisions of § 45.1-399;

3. To advise the Director on the possibility of working with a community development financial institution or other financial institutions to further the purposes of the Program;

4. To advise the Director on the distribution of moneys in the Fund in the form of loans or rebates pursuant to the provisions of § 45.1-399; and

5. To submit to the Governor and the General Assembly an annual report for publication as a report document as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports. The chairman shall submit to the Governor and the General Assembly an annual executive summary of the interim activity and work of the Board no later than the first day of each regular session of the General Assembly. The executive summary shall be submitted for publication as a report document as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

2019, c. 554.

§ 45.1-398. Low-to-Moderate Income Solar Loan and Rebate Fund.

There is hereby created in the state treasury a special nonreverting fund to be known as the Low-to-Moderate Income Solar Loan and Rebate Fund (the Fund). The Fund shall be established on the books of the Comptroller. All funds appropriated for such purpose and any gifts, donations, grants, bequests, and other funds received on its behalf shall be paid into the state treasury and credited to the Fund. Interest earned on moneys in the Fund shall remain in the Fund and be credited to it. Any moneys remaining in the Fund, including interest thereon, at the end of each fiscal year shall not revert to the general fund but shall remain in the Fund. Moneys in the Fund shall be used solely for the purposes of extending loans or paying rebates to electric customers who complete solar installations or energy efficiency improvements pursuant to the provisions of § 45.1-399. Expenditures and disbursements from the Fund shall be made by the State Treasurer on warrants issued by the Comptroller upon written request signed by the Director.

2019, c. 554.

§ 45.1-399. Low-to-Moderate Income Solar Loan and Rebate Pilot Program.

A. The Board, with the approval of the Director, shall develop and establish a Low-to-Moderate Income Solar Loan and Rebate Pilot Program (the Program) and rules for the loan or rebate application process. The Program shall be open to any Virginia resident whose household income is at or below 80 percent of the state median income or regional median income, whichever is greater. The Program shall allow only one loan per residence, irrespective of the ownership of the solar energy system that is installed. Such loan shall be available only for a solar installation or energy efficiency improvements pursuant to the provisions of Chapter 1.2 (§ 36-55.24 et seq.) of Title 36.

B. The Board shall accept an application only from the installer of the solar installation or the agent of the customer.

Each application shall include (i) 12 months of the customer's utility bills prior to installation of the solar energy system and an agreement to provide 12 months of utility bills to the Board following the installation; (ii) the customer's permission for the Director to (a) create a customer profile for the customer if he becomes an eligible loan or rebate customer, (b) aggregate the data provided by such eligible loan or rebate customers, and (c) use such aggregate data for the purpose of lowering energy costs and implementing effective programs; (iii) evidence of the completion of a home performance audit, conducted by a qualified local weatherization service provider, before and after installation of energy efficiency services such as lighting or insulation improvements, attic tents, weatherization, air sealing of openings in the building envelope, sealing of ducts, or thermostat upgrades, to demonstrate that such energy efficiency services were completed and resulted in a reduction in consumption of at least 12 percent; and (iv) an affidavit attesting to the receipt of a public benefit at the time the solar energy system is to be installed.

C. The Board shall review each application submitted to it on a first-come, first-served basis and shall recommend to the Director the approval or denial of each such application within 30 days of receipt. If the Director approves an application, he shall hold a reservation of funds for as long as 180 days for final loan or rebate claim and disbursement.

D. A customer whose application is approved may install an energy system that is interconnected pursuant to the provisions of § 56-594 or any section in Title 56 that addresses net energy metering provisions for electric cooperative service territories.

E. All of the work of installing the energy system shall be completed by a licensed contractor that (i) possesses an Alternative Energy System (AES) Contracting specialty as defined by the Board for Contractors pursuant to the provisions of Chapter 11 (§ 54.1-1100 et seq.) of Title 54.1; (ii) possesses certification for solar installation from the North American Board of Certified Energy Practitioners, Solar Energy International, Roof Integrated Solar Energy, or a similar installer certification program; (iii) possesses a rating of "A" or higher from the local Better Business Bureau; and (iv) has installed a minimum of 150 net-metered residential solar systems in Virginia. If the work of installing the solar energy system requires electrical work, it shall be completed by an electrical contractor licensed by the Virginia Department of Professional and Occupational Regulation. All photovoltaic panels, inverters, and other electrical apparatus used in the solar energy system shall be tested and certified by a federal Occupational Safety and Health Administration Nationally Recognized Testing Laboratory such as UL LLC and installed in compliance with manufacturer specifications and all applicable building and electrical codes.

F. The customer or the installer, acting on behalf of the customer, shall submit any loan or rebate claim within 90 days of completion of the installation of the solar energy system, with completion deemed to have occurred once the solar energy system's bi-directional meter or net meter, or the respective utility's revenue grade meter, has been installed and the system has been electrified. Each rebate claim shall include, at a minimum, a date of system electrification and a time-stamped and date-stamped verification of (i) bi-directional net meter delivery or (ii) the operation of a compatible programmed smart meter capable of tracking net metering activity.

G. The Director shall review and approve or deny a loan or rebate claim within 60 days of receipt and shall provide a written explanation of each denial to the respective claimant. The Director shall disburse from the Low-to-Moderate Income Solar Loan and Rebate Fund created pursuant to § 45.1-398 the loan or rebate for each approved claim within 60 days of its receipt of the claim and according to the order in which its respective application was approved. Any rebate or grant shall be in the amount of no more than $2 per DC watt for up to six kilowatts of solar capacity installed. The customer may use a rebate in addition to any federal tax credits or state incentives or enhancements earned for the same solar installation.

2019, c. 554.

§ 45.1-400. Repealed.

Repealed by Acts 2020, c. 803, cl. 2.

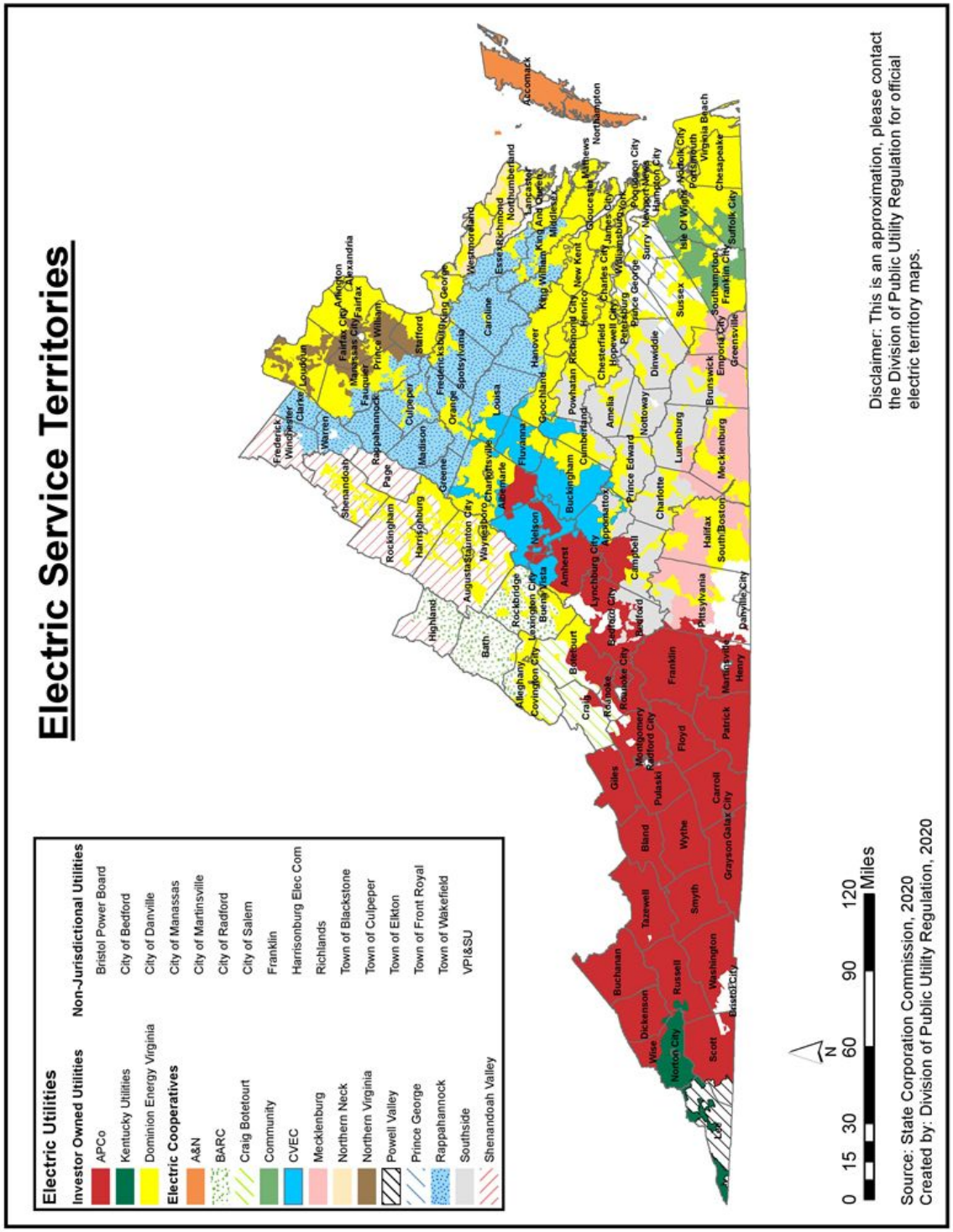
Appendix C: Clean Energy Advisory Board Members and Affiliation

First Name	Last Name	Affiliation	Title	Appointment
Katharine	Bond	Dominion Energy	Vice President, Public Policy and State Affairs	Senate Committee on Rules
TBA		*Hold for electric cooperative representative*		*Senate Committee on Rules*
Taylor	Brown	Sun Tribe Solar		Senate Committee on Rules
Toni	Ostrowski	Virginia Housing Development Authority	Managing Director of Homeownership	Speaker of the House
TBA		*Hold for position reserved for a member of the Council on Environmental Justice*		*Speaker of the House*
TBA		*Hold for position reserved for a representative from the VMD-AEC (cooperative association)*		*Speaker of the House*
TBA		*Hold for Solar energy industry professional*		*Speaker of the House*
TBA		*Hold for LMI Incentive Program Expert*		*Speaker of the House*
TBA		*Hold for licensed attorney dedicated to rural electrification*		*Speaker of the House*

First Name	Last Name	Affiliation	Title	Appointment
KC	Bleile	Viridiant **Designee of the Department of Housing and Community Development*	Executive Director	Governor
Samuel	Towell	Office of the Attorney General, Division of Consumer Counsel	Deputy Attorney General	Governor
Janaka	Casper	Community Housing Partners **Designee of the Department of Housing and Community Development*	Chief Executive Officer	Governor
William	Greenleaf* **Vice Chair*	Virginia Community Capital **Employee of a Community Development Financial Institution - Impact Investing*	Clean Energy Loan Officer	Governor
Hannah	Coman* **Chair*	Apex Clean Energy	Associate General Counsel	Governor
William	Reisinger	ReisingerGooch, PLC **Licensed Attorney - Renewable Energy Law and Transactions*	Attorney	Governor

First Name	Last Name	Affiliation	Title	Appointment
Susan	Kruse	CommunityClimate Collaborative (C3)	Executive Director	Governor
John	Warren	Virginia Department of Mines, Minerals and Energy (DMME)	Director	*Ex-officio with voting privileges*

Appendix D: Virginia Electric Service Territories, courtesy the Commission



Appendix E: U.S. DOE LEAD Analysis by Virginia Census Tract (excerpt)

Low-Income Energy Affordability Data Tool Map Export (https://www.energy.gov/eere/slsc/maps/lead-tool)

Compiled by:	Carrie Hearne, Virginia Department of Mines, Minerals and Energy
Exported On:	9/11/2020
AMI:	0% - 30%; 30% - 60%; 60% - 80%
Building Age:	Before 1940; 1940 - 59; 1960 - 79; 1980 - 99; 2000 - 09; 2010+
Heating Fuel Type:	Electricity
Building Type:	1 unit detached
Rent/Own:	Owner-occupied

	Geography ID	County	Name	Avg. Energy Burden (% income)	Avg. Annual Energy Cost	Housing Counts
1	51003010903	Albemarle County	Census Tract 109.03	51	$ 950	17
2	51590000600	Danville city	Census Tract 6	27	$ 5,298	20
3	51760040400	Richmond city	Census Tract 404	27	$ 2,497	8
4	51590000300	Danville city	Census Tract 3	24	$ 5,137	105
5	51590000400	Danville city	Census Tract 4	24	$ 5,109	89
6	51001090100	Accomack County	Census Tract 901	24	$ 4,847	127
7	51590001000	Danville city	Census Tract 10	21	$ 5,553	92
8	51590000200	Danville city	Census Tract 2	21	$ 5,401	89
9	51590001100	Danville city	Census Tract 11	21	$ 4,902	31
10	51590000700	Danville city	Census Tract 7	21	$ 4,776	69
11	51590001200	Danville city	Census Tract 12	21	$ 4,553	48
12	51590000800	Danville city	Census Tract 8	21	$ 4,539	97
13	51119951200	Middlesex County	Census Tract 9512	21	$ 4,218	212
14	51830370200	Williamsburg city	Census Tract 3702	21	$ 2,138	14
15	51143011200	Pittsylvania County	Census Tract 112	20	$ 4,171	93
16	51590000900	Danville city	Census Tract 9	19	$ 4,908	170
17	51117930102	Mecklenburg County	Census Tract 9301.02	19	$ 4,677	79
18	51013101702	Arlington County	Census Tract 1017.02	18	$ 6,616	1
19	51590000100	Danville city	Census Tract 1	18	$ 4,663	129
20	51171040201	Shenandoah County	Census Tract 402.01	18	$ 4,646	45
21	51590000500	Danville city	Census Tract 5	18	$ 4,495	16
22	51117930700	Mecklenburg County	Census Tract 9307	18	$ 3,782	69
23	51117930500	Mecklenburg County	Census Tract 9305	18	$ 3,118	75
24	51163930200	Rockbridge County	Census Tract 9302	18	$ 3,081	245
25	51710004900	Norfolk city	Census Tract 49	18	$ 2,061	4
26	51810045412	Virginia Beach city	Census Tract 454.12	17	$ 5,020	76
27	51067020101	Franklin County	Census Tract 201.01	17	$ 3,356	298
28	51111930300	Lunenburg County	Census Tract 9303	17	$ 3,061	24
29	51059482100	Fairfax County	Census Tract 4821	17	$ 2,565	8
30	51067020102	Franklin County	Census Tract 201.02	16	$ 3,734	93
31	51133020200	Northumberland County	Census Tract 202	16	$ 3,705	204
32	51083930100	Halifax County	Census Tract 9301	16	$ 2,962	89
33	51660000207	Harrisonburg city	Census Tract 2.07	16	$ 2,409	17
34	51700032127	Newport News city	Census Tract 321.27	16	$ 2,227	14
35	51193010100	Westmoreland County	Census Tract 101	15	$ 3,896	301
36	51019030503	Bedford County	Census Tract 305.03	15	$ 3,752	150
37	51133020100	Northumberland County	Census Tract 201	15	$ 3,489	248
38	51057950800	Essex County	Census Tract 9508	15	$ 3,310	104
39	51740210900	Portsmouth city	Census Tract 2109	15	$ 3,262	8
40	51117930600	Mecklenburg County	Census Tract 9306	15	$ 3,137	75
41	51169030300	Scott County	Census Tract 303	15	$ 2,961	143
42	51117930800	Mecklenburg County	Census Tract 9308	15	$ 2,911	158
43	51135000200	Nottoway County	Census Tract 2	15	$ 2,903	106
44	51029930202	Buckingham County	Census Tract 9302.02	15	$ 2,902	137
45	51595890200	Emporia city	Census Tract 8902	15	$ 2,414	59
46	51133020300	Northumberland County	Census Tract 203	14	$ 3,616	352
47	51001090200	Accomack County	Census Tract 902	14	$ 3,469	172
48	51119950900	Middlesex County	Census Tract 9509	14	$ 3,244	77
49	51131930300	Northampton County	Census Tract 9303	14	$ 3,097	160
50	51119951100	Middlesex County	Census Tract 9511	14	$ 3,021	249

See full analysis here:

https://dmme.virginia.gov/de/LinkDocuments/Clean%20Energy%20Advisory%20Board/Presentations/virginia-lead-data-9.16.20.xlsx

Appendix F: DMME Demonstration Project Proposal

Virginia LMI Solar Pilot Program – Demonstration Project Proposal*

Drafted May 18, 2020

**Subject to approval*

With guidance from the Clean Energy Advisory Board (CEAB), Virginia's Department of Mines, Minerals and Energy (DMME) intends to work with partner organizations to install solar systems for low-income families (Roanoke/Blacksburg area and Charlottesville/Albemarle County area) that have received Weatherization Assistance Program (WAP) services within the past year, and are also currently receiving Low Income Home Energy Assistance Program (LIHEAP) bill assistance. After the system is installed, system output and performance will be monitored and energy data will be collected to demonstrate bill reduction provided by solar net-metering credits over a one-year period. Interviews will be conducted with families to determine how their perception of solar energy has changed, and how bill reduction has helped better meet their basic needs.

Objectives:

- Demonstrate additional average bill cost reduction provided by solar and reduction of energy cost burden on low-income households that have been served by WAP, meet 12 percent energy reduction requirement established by HB 2741 Low to Moderate Income (LMI) Solar Pilot program guidelines, and are currently on LIHEAP bill assistance.
- Use current COVID-19 work interruption to plan demonstration projects and develop agreements with partner organizations so that customer acquisition can begin as soon as possible, and installation work can begin as soon as safety protocols and social distancing will allow.
- Due to COVID, WAP providers and many solar installers are not working, with exception for some outside tasks that can be completed without interaction with the customer.
- Develop a low-cost and effective method for finding good solar sites based on roof orientation and condition. Consider the feasibility and cost of other mounting platforms (e.g. pole-mounted) if the rooftop is not suitable.
- Build a set of principles/best practices/recommendations that will inform development of a larger LMI Solar Pilot program, to be launched when additional funding resources and commitments can be secured.

Program Financing and Project Economics

DMME and the CEAB will work to identify potential funding source(s), so an alternative such as a smaller scale demonstration project would seem to offer the most benefit at this time.

DMME is seeking US Department of Energy permission to use $200,000** in federal American Recovery and Reinvestment Act (ARRA) funds as grants or subsidies to other partners (such as solar installers) to enable this demonstration project. Terms and conditions for ARRA funds are most advantageous for single-family (SF), owner-occupied homes. For multi-family (MF) buildings, other ARRA requirements apply, which may make contractor participation more challenging. Another potential issue with regard to solar system installation for MF buildings is attribution of solar net-metering credits across tenants, particularly when the building is master-metered. Accordingly, DMME would suggest limiting this demonstration project participation to SF owner-occupied residences.

The intent is to subsidize the cost up to $12,000 per household (which is the limitation established by HB 2741, 2019) without providing a direct grant to homeowners to avoid state and federal income tax implications. This may be accomplished by providing grants to solar installers with agreement that the credits will be passed through on customer's bills. Several CEAB members and other stakeholders have suggested that for WAP-eligible households, loan-based programs (even low- or zero-interest loans) will be unlikely to generate uptake and be successful, particularly in the anticipated economic downturn following COVID-19 restrictions and recovery.

Use of Power Purchase Agreements (PPAs) are the premise for successful LMI solar program models in other states (such as CT) where a third-party owns and maintains the PV system, and state incentives help reduce the customer's monthly payment for the PPA. The Virginia Clean Economy Act (VCEA) of 2020 updated Virginia's code so that "low-income" households may utilize PPAs, which may provide another program development pathway.

DMME has developed initial estimates on subsidies (grants, loans and combinations thereof) that would make these installations cash flow positive for customers, based on average installed $/W, average monthly electric bills, and estimated production from 4-6 kW systems in Virginia (please see attached table). Clearly, providing a full subsidy offers the most immediate and long-term benefits in bill reduction and increased cash flow for the customer.

Customer Eligibility Requirements

1. SF, owner-occupied households in targeted regions
2. WAP/LIHEAP eligible
3. Weatherization work completed in past 12 months
4. Customer willing to provide access to past year's utility bills (or authorization to access utility data) and have monitoring equipment installed for one year
5. Customer's energy burden is above X% per guidance established by US Department of Energy's LEAD Tool

First-come, first-served but priority for households currently using LIHEAP bill assistance.

Anticipated Outcomes and Lessons Learned

Absent influx of federal funds for post-COVID economic stimulus, an anticipated outcome/challenge will continue to be funding needed to scale the LMI Solar Pilot Program using a full subsidy model. One possibility is to partner with the Department of Social Services (DSS) to utilize LIHEAP funds for solar system installation. A significant amount of Coronavirus Aid Relief and Economic Security (CARES) Act funding is anticipated to come to DSS in Virginia. This project may help demonstrate the value proposition that solar may help break cyclical dependence, particularly for households that are consistently needing to utilize bill assistance to cover monthly energy costs.

Longer-term, it may be that a community solar or subscription based program may be the most cost-effective pathway to apply public subsidies at scale to increase access to solar for LMI households, rather than individualized rooftop systems. A partnership with a utility may offer a pathway here. In terms of customer market segment, zero-interest or low-interest loan programs may be a more effective tool for customers in the 60%-80% AMI band.

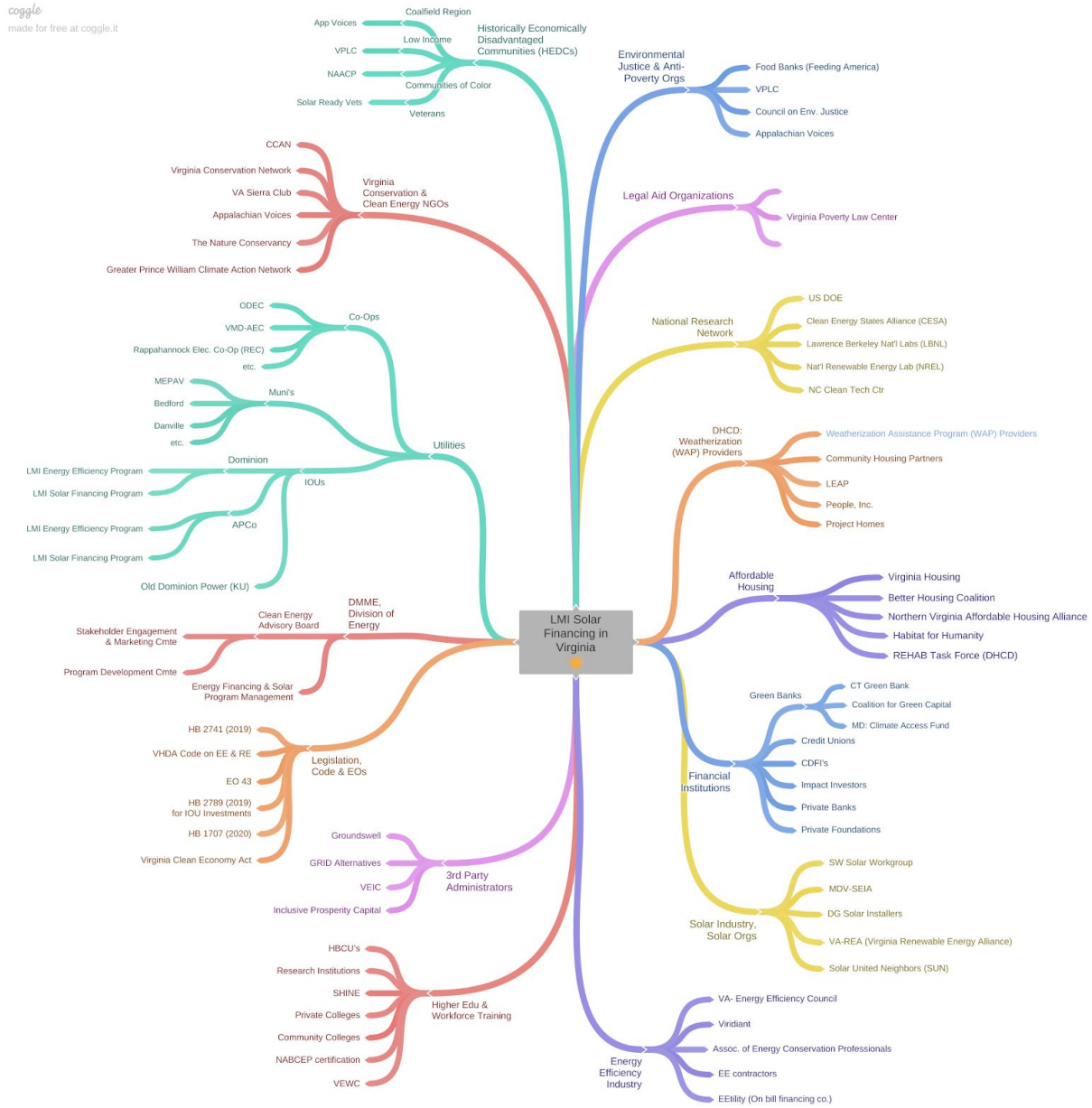
Lessons learned are likely to be consistent with efforts in other states to bring clean energy benefits to low-income communities. For example, that trusted community organization partnerships must be established to outreach and engage customers. Programs in other states have also demonstrated that customer understanding of solar system benefits are significant and potentially transformative. With customer permissions and privacy concerns addressed, we anticipate lessons learned could be incorporated into case studies, and data acquired and analysis can be promoted through conferences/industry forums, partner websites and social media.

Team Members

- Project lead: DMME with approval and guidance from CEAB
- State agency partners: Virginia Department of Housing and Community Development (DHCD) WAP and Virginia Department of Social Services (DSS) LIHEAP
- Community-based organizations: Community Housing Partners/Association of Energy Conservation Professionals (Roanoke/Blacksburg) and Community Climate Collaborative (Charlottesville)
- Technical Assistance and Evaluation: Virginia Tech Construction Management Program; Solar Installers; Viridiant

***Please note this amount was higher in the original proposal but was reduced due to COVID-19 budgetary constraints. The $200,000 has been pre-approved for use in FY2021, and subject to approval, may be deposited into the non-reverting State Treasury Fund for use in the LMI Solar Loan and Rebate Fund.*

Appendix G: LMI Solar Stakeholder Map



A high resolution version of this stakeholder map can be found online [here via Coggle.it](Coggle.it).

Appendix H: Comments to Commission on Shared Solar, PUR-2020-00125, dated July 24, 2020, and November 2, 2020

Virginia Clean Energy Advisory Board

% Department of Mines, Minerals and Energy
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July 24, 2020

Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
Tyler Building – First Floor
1300 East Main Street
Richmond, Virginia 23219

Subject: Case Number PUR-2020-00125

Dear Mr. Peck:

The Virginia Clean Energy Advisory Board (the Board) respectfully submits this letter as the comments of the Board to the State Corporation Commission (Commission) in the above-referenced proceeding. The Commission has opened this proceeding to receive comments from interested parties to inform regulations for a new shared solar program available to customers of Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion") pursuant to § 56-594.3 of the Virginia Code.[1] The Board appreciates the opportunity to provide comments on this very important opportunity to increase access to solar energy for low- and moderate-income Virginians in Dominion's territory.

In 2019 the Virginia General Assembly passed HB 2741 establishing the Board as an advisory board in the executive branch of state government.[2] The stated purpose of the Board is to establish a pilot program for disbursing loans or rebates for the installation of solar energy infrastructure in low-income and moderate-income households through the Low-to-Moderate Income Solar Loan and Rebate Fund. Further, in accordance with the Board's mission statement, "all actions and recommendations of the Board shall be for the purpose of expanding access to cost-effective clean energy for low- and moderate-income Virginians throughout the

[1] Order Directing Comment, Va. State Corp. Comm'n, Docket No. PUR-2020- 00125, at 1 (July 1, 2020), https://scc.virginia.gov/docketsearch/DOCS/4ns%2301!.PDF.
[2] HB 2741 (Mar. 18, 2019), https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0554.

Commonwealth, including citizens living in both single- and multi-family housing facilities and in rural or economically disadvantaged communities."[3]

With the recent passage of the Virginia Clean Economy Act and Governor Northam's Clean Energy Virginia initiative, Virginia is on the path to fundamentally transform the state's electricity generation and grid. The Board's mission is to ensure that low- and moderate-income Virginians are not left behind in this energy transition. A successful shared solar program is one way to allow low- and moderate-income Virginians to access solar energy and participate in Virginia's energy transition.

Many residential and non-residential electricity customers face significant challenges to installing rooftop solar including: up-front and maintenance costs of the system; suboptimal roof orientation or structural constraints; and shading from trees or other buildings. For renters, residents of multifamily buildings, and low- to moderate income customers, shared solar programs offer customers the opportunity to invest in solar in a way that fits their budgets, and derive some of the benefits (such as lowering monthly electric bills and energy burdens), while a third-party entity is responsible for building and maintaining the solar facility and ensuring the benefits are attributed to participating customers.

This year the Virginia General Assembly passed Chapters 1238 (HB 1634) and 1264 (SB 629) of the 2020 Virginia Acts of Assembly requiring the Commission to establish by regulation a program affording Dominion customers the opportunity to participate in shared solar projects, often referred to as community solar programs. This new legislation, codified as § 56-594.3 of the Virginia Code, allows customers of all classes to subscribe for a specific amount of electricity generated by a solar facility to offset their energy usage from their utility. The shared solar facility must be a solar photovoltaic device that does not exceed 5,000 kilowatts (AC) located in Dominion's territory with at least three subscribers, and at least 40 percent of its capacity must be subscribed by customers with subscriptions of 25 kw or less. The Commission must also establish a minimum bill for all subscribers to pay, except for low-income customers, that includes "the costs of all utility infrastructure and services used to provide electric service and administrative costs of the shared solar program."[4]

The shared solar facility program is capped at 150 megawatts unless and until at least 45 megawatts of the aggregated shared solar capacity has been subscribed to by low-income customers, and then the Commission can increase the program size by an additional 50 megawatts of capacity.[5] In addition, "the Commission, in collaboration with the Department of Mines, Minerals and Energy, may adopt mechanisms to ensure low-income customer participation."[6] Pursuant to the statute, the Commission shall also "create a stakeholder working group including low-income community representatives and community solar providers to

[3] Clean Energy Advisory Board, 2019 Annual Report (Jan. 8, 2020) at 4, *available at*: https://www.dmme.virginia.gov/de/LinkDocuments/Clean%20Energy%20Advisory%20Board/Reports/2019%20Annual%20Report%20FINAL.pdf
[4] SB 629(1)(D).
[5] SB 629(1)(E).
[6] *Id*.

facilitate low-income customer and low-income service organization participation in the program."[7]

In developing these regulations, the Commission does not have to reinvent the wheel. Many other states have already established similar, successful projects. Below is a high-level overview of issues to be addressed in the regulations and suggestions regarding lessons learned and best practices gleaned from pertinent resources. This is not an exhaustive issues list, but we encourage the Commission to consider and incorporate these points when drafting the shared solar regulations.

I. Low-Income Customers Must Be Able To Participate Easily.

It is imperative that low-income customers are not only able to sign-up for this program but that it is easy for them to do so. Essentially this means that participation should not be administratively burdensome for the low-income customer and the program should have little to no risk for the customer. In order to achieve these goals, the following points should be addressed:

A. Verification of low-income customers' qualifications should not be an obstacle to participation.

How to verify low-income customers' qualifications is an important question and could greatly determine the success of the program. Similar programs that have enforced rigorous verification processes requiring customers to submit personal financial records have had low participation rates.[8] The shared solar program should not require credit checks, as stated in the statute[9], and it should also not require customer's tax returns.

There are less burdensome and invasive ways to verify customers' qualifications.[10] The Board recommends that the regulations provide a menu of options by which the customers may choose to provide evidence to verify their qualifications. This provides customers with a choice regarding how to present their personal, sensitive financial information.

The following is a non-exhaustive list that should be included in a menu of options to verify income qualifications:

1. Self-attestation;
2. Location qualified based on census tract data; and/or

[7] SB 629(1)(F)(3).
[8] *See* Heeter, Jenny, Lori Bird, Eric O'Shaughnessy, & Sam Koebrich, Design and Implementation of Community Solar Programs for Low and Moderate-Income Customer, National Renewable Energy Laboratory 28-29 (Dec. 2018), https://www.nrel.gov/docs/fy19osti/71652.pdf (hereinafter NREL: Design and Implementation of Community Solar Programs) (describing challenges to enrolling participants if eligibility requirements are complex); *see also* Shared Renewable Energy for Low- to Moderate-Income Consumers: Policy Guidelines and Model Provisions, Interstate Renewable Energy Council 8-9 (2016), https://irecusa.org/publications/shared-renewable-energy-for-low-to-moderate-income-consumers-policy-guidelines-and-model-provisions/ (explaining the difficulties in signing up low-income customers in the Colorado Community Solar Gardens program).
[9] SB 629(1)(F)(13).
[10] *See e.g.*, NREL: Design and Implementation of Community Solar Programs at 10-11.

3. Evidence of qualification in another program for low-income households.

Evidence of these qualifications could then be evaluated by the subscriber organization, a state agency, a utility or a third-party administrator.[11]

This shared solar statute defines "Low-income customer" as "any person or household whose income is no more than 80 percent of the median income of the locality in which the customer resides. The median income of the locality is determined by the U.S. Department of Housing and Urban Development." It is important that the Commission adopt an interpretation of this definition recognizing Virginia's broad economic differences between northern Virginia localities and the southern and southwestern localities of Virginia, as well as differences in housing types – i.e., single-family homes versus multifamily properties – and the existing programs and criteria already established to support low-income customers residing within each housing type. For example, VHDA/HUD defines low-income as 80-percent of the *local area* median income which applies primarily toward qualifying households residing within multifamily properties. Furthermore, Virginia DHCD, which administers the Weatherization Assistance Program (WAP) to reduce energy burdens of income-qualifying households – predominantly households residing within single-family detached homes – qualifies households based on 60-percent of the *state* median income. Using solely 80-percent of area median income as the eligibility criteria would restrict WAP-qualifying households from participating in southern and southwestern localities of Virginia while using 60-percent of state median income solely would restrict VHDA/HUD income-qualifying households in northern Virginia from participating in the program. The Board recommends specifying in the regulations that any household qualifying as low-income as defined by either VHDA/HUD or Virginia DHCD should be eligible to participate in the shared solar program offering.

In addition, the menu of options to verify eligibility should not be based entirely on eligibility in other programs because that could be too restrictive. In drafting the regulations the Commission should review the definitions of any existing low-income programs that may be used as a prerequisite to make sure that all low-income customers whose income is no more than 80 percent of the median income are able to prove eligibility easily.

B. Customers should bear no financial risk by subscribing.

Low-income customers should bear little to no financial risk by signing up for this shared solar program. The statute requires that any rule or utility implementation filing adopt standardized consumer disclosure forms.[12] This is a necessary first-step in ensuring strong consumer protection provisions. Consumers should also be provided upfront information about billing and pricing terms, summaries of any charges, information about any potential changes to

[11] *See e.g.*, Low Income Verification Form, Xcel Energy, https://www.xcelenergy.com/staticfiles/xe/Marketing/Files/co-sr-community-Low-Income-Verification-Form.pdf (allowing different organizations and administrators to verify qualifications); Community Solar Policy Decision Matrix: Guidance for Designing Community Solar Programs, Coalition for Community Solar Access at 5 (Mar. 2019), http://www.communitysolaraccess.org/wp-content/uploads/2019/04/2019CommunitySolarPolicyMatrix-2.pdf (advocating for "an independent, third-party administrator that has staff dedicated to the Community Solar program and is overseen by a state agency…").

[12] SB 629(1)(F)(8).

charges, conditions of services, any penalties, and how credits are calculated.[13] Further, the consumer disclosure form should guarantee bill savings for all subscribing customers. In drafting these regulations the Board recommends that the Commission review the contract disclosure requirements included in the rules for the community solar programs in Maryland and Minnesota.[14]

C. Customers should be able to continue their subscriptions if they move within Dominion's territory and low-income customers should be able to withdraw with no penalties at any time.

The statute states that the regulations should "reasonably allow for the transferability and portability of subscriptions, including allowing a subscriber to retain a subscription to a shared solar facility if the subscriber moves within the same utility's service territory."[15] In addition, low-income customers should be able to withdraw with no penalties at any time. This provision would further decrease the low-income customer's financial risk in participating in the program. If it is not clear that a customer can easily withdraw from the program at any time, potential customers may not want to subscribe.

D. Regulations should be informed by a robust stakeholder process with strong participation from low-income customers and low-income service organizations.

The statute states that any rule or utility implementation filings approved by the Commission shall "create a stakeholder working group including low-income community representatives and community solar providers to facilitate low-income customer and low-income service organization participation in the program."[16] Further, "the Commission, in collaboration with the Department of Mines, Minerals and Energy, may adopt mechanisms to ensure low-income customer participation."[17] Low-income communities are best served when they are engaged in the process of developing the programs that serve them.[18] The Board encourages the Commission and the Department of Mines, Minerals and Energy to engage with low-income communities and low-income service organizations in a stakeholder process when developing the regulations to ensure low-income customer and low-income service organization participation. This process should address at a minimum the following issues:

1. Low-income customer outreach for enrollment and on-going communication after enrollment to improve customer experience;
2. Requirements to verify low-income qualifications;

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[13] Chase, Diana & Nate Hausman, Consumer Protection for Community: A Guide for States, Clean Energy States Alliance and U.S. Dep't of Energy Sun Shot Initiative, 20 (June 2017), https://www.cesa.org/resource-library/resource/consumer-protection-for-community-solar-a-guide-for-states/.

[14] *Id*.

[15] SB 629(1)(F)(6).

[16] SB 629(1)(F)(3).

[17] *Id*.

[18] *See generally*, Clean Energy States Alliance, *et. al*., Solar with Justice: Strategies for Powering Up Under-Resourced Communities and Growing an Inclusive Solar Market, 7 (Dec. 2019), https://www.cesa.org/resource-library/resource/solar-with-justice/ (stating that partnerships involving trusted community organizations are essential and installations for community institutions deserve special consideration as two of the top ten findings and recommendations in the report).

3. Oversight of low-income qualification verification process and whether this should be handled by the subscriber organization, a state agency, a utility or a third-party administrator;
4. How the guaranteed bill savings should be measured (monthly vs. annually, baseline to be used, etc.); and
5. Whether additional requirements should apply to "subscriber organizations" engaging with low-income customers and, if so, what these additional requirements should entail. For example, stakeholders should consider whether subscriber organizations need to demonstrate prior success working with low-income customers before qualifying to enroll low-income customers.

Ongoing program administration should be informed by frequent communication with low-income customers. This communication could occur via a third-party administrator, low-income facilitator, or through on-going stakeholder processes administered by the Commission or another state agency.

II. Low-Income Service Organizations Must Be Able To Participate Easily.

The statute explicitly allows "low-income service organizations" to subscribe to this shared solar program. This is an important opportunity to provide access to renewable energy to an under-served population because in some cases a utility customer is not the end user of the electricity. For example, in multi-family affordable housing units that are master-metered the building owner may need to serve as the subscriber on behalf of its tenants. Low-income service organizations could also be organizations that serve the low-income population. By allowing low-income service organizations to subscribe, many more people will be able to access clean, affordable solar energy and benefit from the cost-savings. In order to achieve these goals, the following points should be addressed:

A. The Commission should adopt a broad definition of "low-income service organizations."

The term "low-income service organization" is defined in the statute as "a nonresidential customer of an investor-owned utility whose primary purpose is to serve low-income individuals and households." The Commission should adopt a broad interpretation of this definition and include guidelines for determining organizations primarily focused on serving low-income individuals and households as well as examples, such as affordable housing building owners, food pantries, career development organizations, grocery stores in "food deserts" and other social services.

B. The Commission should require low-income service organizations to pass on savings to the low-income persons and households they serve via a tangible benefit.

Low-income service organizations, like low-income customers, should have guaranteed savings from participating in the shared solar program. However, the program regulations should not require direct bill crediting. Instead, low-income service organizations should be required to pass these savings on to the low-income persons and households they serve either via direct bill

crediting or a tangible benefit. Other programs have allowed free wi-fi or improvements to common spaces to qualify as tangible benefits.[19]

C. Regulations should be informed by a robust stakeholder process with strong participation from low-income customers and low-income service organizations.

As stated above, the Board encourages the Commission and the Department of Mines, Minerals and Energy to engage with low-income communities and low-income service organizations in a stakeholder process when developing the regulations to ensure low-income customer and low-income service organization participation. In addition to the points listed in the low-income customer stakeholder process above, this process should address at a minimum the following issues:

1. Low-income service organization outreach for enrollment and on-going communication after enrollment to improve customer experience;
2. Requirements to verify low-income service organization qualifications;
3. Oversight of low-income service organization qualification verification process and whether this should be handled by the subscriber organization, a state agency, a utility or a third-party administrator;
4. Whether additional requirements should apply to "subscriber organizations" engaging with low-income service organizations and, if so, what these additional requirements should entail. For example, stakeholders should consider whether subscriber organizations need to demonstrate prior success working with low-income service organizations before qualifying to enroll low-income service organizations;
5. Any additional obstacles that may prevent low-income service organizations from participating;
6. How the guaranteed bill savings should be measured (monthly vs. annually, baseline to be used, etc.);
7. Whether customers who live in HUD-assisted properties will be able to participate in the shared solar program, and if not what percentage of multi-family residents are in HUD-assisted properties, and how best to address this problem;[20]

[19] NREL: Design and Implementation of Community Solar Programs at 8 ("In Rhode Island, direct bill crediting is not required, but policy requires building owners to provide tenants with 'tangible benefits' such as free Wi-Fi or improvements in common spaces.")

[20] Federal housing law requires that a residents' share of payments to reside in a HUD-assisted housing property must equal 30 percent of the household's monthly income. The payments are defined as a combination of rent and estimated utility expenses, known as utility allowances. As a result, when solar power reduces a resident's electric utility bill, HUD requires that the resident's rent increases accordingly -- erasing the financial benefit of solar to low-income households. Seth Mullendore, Clean Energy Group, Housing Department Decision Will Bring Solar Benefits to Low-Income Households in California (Aug. 16, 2019), https://www.cleanegroup.org/housing-department-decision-will-bring-solar-benefits-to-low-income-households-in-california/. Last year HUD issued a memorandum that fixes this problem but it only applies to HUD-assisted properties in California's Solar on Multifamily Affordable Housing (SOMAH program). This memorandum states that the solar credits allocated through the SOMAH program are an "incidental benefit" and should not be included in the calculation of the household's income and should not be included in the household's utility allowances. Therefore, SOMAH

8. The type of tangible benefits low-income service organizations should provide to the low-income persons and households they serve; and
9. How best to encourage the statutorily mandated goal of "public-private partnerships to further the Commonwealth's clean energy and equity goals, such as state agency and affordable housing provider participation in the program as subscribers of shared solar projects."[21]

Ongoing program administration should be informed by frequent communication with low-income service organizations. This communication could occur via a third-party administrator, low-income facilitator, or through on-going stakeholder processes administered by the Commission or another state agency.

III. Further Recommendations.

To date the Board has focused on single-family clean energy access structures because before the General Assembly passed this statute those were the only options for low- and moderate-income households. This shared solar program provides an avenue to expand renewable energy access to customers who cannot install solar on their homes, including low-income customers. If this program is successful it will contribute towards achieving Virginia's 100 percent zero-carbon energy goals while also providing customers with the added benefit of bill reductions.

The Board has confined these comments to the issues that most directly impact low-income customers. However, the Board believes that in order for this program to be successful for low-income customers, it also needs to be financially attractive to potential subscribers who are not low-income customers. Unless the Commission develops a minimum bill formula that provides savings to all subscribers, these shared solar facilities will not be financeable and will not be built. As a result, the only way the Commission can "reasonably allow for the creation of shared solar facilities"[22] is by developing a minimum bill formula that provides savings to all subscribers.

As referenced above, a robust stakeholder process to address low-income customer participation is important to establish program guidelines that ensure low-income customer enrollment. The Board is ready and willing to work with and assist the Commission and the Department of Mines, Minerals and Energy to this end this fall. The Board respectfully requests an invitation to participate in the stakeholder process as it is extremely relevant to our ongoing work in this space. The Board specifically hopes to add value by ensuring that this shared solar program complements other existing or future programs for low-income customers.

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participants who live in HUD-assisted properties would be able to financially benefit from the cost savings of the shared solar program. U.S. Dep't of Housing and Urban Development, Memorandum re the Treatment of Solar Virtual Net Energy Metering Credits on Tenant Utility Bills (July 8, 2019), https://www.cleanegroup.org/housing-department-decision-will-bring-solar-benefits-to-low-income-households-in-california/. Note that HUD-assisted properties that are master-metered for electricity are not eligible to participate in the SOMAH program.

[21] SB 629(1)(F)(4).

[22] SB 629(1)(F)(1).

IV. Conclusion.

In conclusion, the Commission has the opportunity to help ensure that low-income customers are not left behind in the energy transition. This program is one way to increase access to affordable, clean energy for those communities who need it the most. We encourage the Commission to adopt best practices as recommended by leading national clean energy organizations such as National Renewable Energy Laboratory, Clean Energy States Alliance and Interstate Renewable Energy Council, and develop a stakeholder process to allow further involvement in developing these processes.

We appreciate your consideration of these comments. If you need any further information about the role the Board plays in promoting clean energy options for low- to moderate-income customers in Virginia, or the importance of the shared solar regulations, please contact me at 434-977-4090 or hcoman@selcva.org.

Sincerely,

Hannah Coman
Chair

Virginia Clean Energy Advisory Board

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November 2, 2020

Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
Tyler Building – First Floor
1300 East Main Street
Richmond, Virginia 23219

Subject: Case Number PUR-2020-00125

Dear Mr. Peck:

The Virginia Clean Energy Advisory Board (the "Board") respectfully submits this letter as the comments of the Board to the State Corporation Commission (the "Commission") in the above-referenced proceeding. The Commission opened this proceeding to receive comments from interested parties to inform regulations for a new shared solar program available to customers of Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion") pursuant to § 56-594.3 of the Virginia Code (the "Shared Solar Statute").[1] The Board submitted comments on July 24, 2020 in this docket highlighting important issues to be addressed in the regulations (the "Board's July Comments") and the Board submits comments today on the Commission's proposed regulations. The Board appreciates the opportunity to provide comments on this very important opportunity to increase access to solar energy for low- and moderate-income Virginians in Dominion's territory. This shared solar program is even more important now as COVID-19 has left an unprecedented number of customers with arrearages and shared solar is an opportunity for customers to receive bill savings.

In 2019 the Virginia General Assembly passed HB 2741 establishing the Board as an advisory board in the executive branch of state government.[2] The Board's mission is to ensure that low- and moderate-income Virginians can access cost-effective clean energy and are not left behind in Virginia's clean energy transition. Many residential and non-residential electricity customers face significant challenges to installing rooftop solar including: up-front and maintenance costs of the system; suboptimal roof orientation or structural constraints; and shading from trees or other buildings. For renters, residents of multifamily buildings, and low- to moderate income customers, shared solar programs offer customers the opportunity to invest in solar in a way that fits their budgets, and derive some of the benefits (such as lowering monthly electric bills

[1] Order Directing Comment, Va. State Corp. Comm'n, Docket No. PUR-2020- 00125, at 1 (July 1, 2020), https://scc.virginia.gov/docketsearch/DOCS/4ns%2301!.PDF.
[2] HB 2741 (Mar. 18, 2019), https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0554.

and energy burdens), while a third-party entity is responsible for building and maintaining the solar facility and ensuring the benefits are attributed to participating customers. As a result, the Board's mission includes supporting robust shared solar programs that are broadly available, especially to low- and moderate-income Virginians. The Shared Solar Statute addresses this goal by specifically mandating that at least 30% of shared solar participants be low-income. In fact, Senator Surovell stated in his letter to the Commission regarding the legislative intent of the Shared Solar Statute that "… it is the intent to make Virginia the national leader for Low and Moderate Income participation."[3] The regulations should reflect this goal.

As we did in our original comments, the Board has confined these comments to the issues most directly impacting low-income customers. However, the Board still believes that for this program to be successful for low-income customers, it also needs to be financially attractive to potential subscribers who are not low-income customers. As a result, the bill credits need to provide savings to all subscribers, and this can only be achieved by having a low minimum bill and low administrative charges. As set forth in these proposed regulations, it is unclear whether this program will result in monetary savings for subscribers.

In addition, since projects can take many months or years to develop, the Board suggests that the Commission clarify in the regulations that subscriber organizations may apply for licenses, register projects and interact with customers prior to 2023 so that the program is ready for customer enrollment in 2023.

The Board understands that the Shared Solar Statute mandates a tight turnaround time for these regulations. However, we believe that to have a successful program the following issues need to be addressed at a minimum whether here in regulations or in subsequent guidance issued by the Commission.

I. Proposed Regulations Do Not Adequately Address Low-Income Participation.

In order to make Virginia the national leader for low- and moderate-income participation in shared solar, low-income customers need to be able to easily sign-up for this program and the regulations should address this by providing clear guidance. The Board addressed the importance of this issue extensively in the Board's July Comments.[4]

A. Regulations Do Not Provide Guidance on Low-Income Eligibility Verification.

As proposed, the regulations do not provide guidance regarding low-income eligibility verification. The only reference to this process is that the regulations state that "[e]ach subscriber organization shall retain a record of all disclosure forms, low-income customer proof of eligibility, and subscriber allocation lists for a period of at least three years." 20VAC5-340-90(A). But the regulations give no indication of what "customer proof of eligibility" should entail. It is imperative that the Commission provide clear guidance on eligibility requirements. Without thoughtful guidelines for eligibility verification, the verification process could become an insurmountable

[3] Letter from Sen. Scott Surovell to the Commission, Va. State Corp. Comm'n, Docket No. PUR-2020-00125, at 2 (July 28, 2020), https://scc.virginia.gov/docketsearch/DOCS/4_%23_01!.PDF.
[4] Letter from the Clean Energy Advisory Board, Va. State Corp. Comm'n, Docket No. PUR-2020-00125 (July 24, 2020), https://scc.virginia.gov/docketsearch/DOCS/4_6m01!.PDF.

barrier for otherwise qualified participants. Other states have implemented successful shared solar programs with low-income participation, and these experiences have demonstrated that eligibility verification is an important component.[5] Without clear guidance on this point from the Commission: (i) subscriber organizations will lack clarity on the feasibility of subscribing low-income customers in Virginia and (ii) subscriber organizations will be forced to develop their own policies which may vary and result in a patchwork of confusing standards and policies for customers and renewable energy advocates. The Board recommended certain criteria be used for eligibility verification in the Board's July Comments and the Board hopes that the Commission will adopt these recommendations in its final regulations or subsequent guidance.

B. Regulations Do Not Reference or Create A Stakeholder Working Group.

The Shared Solar Statute states that "any rule or utility implementation filings approved by the Commission shall … create a stakeholder working group including low-income community representatives and community solar providers to facilitate low-income customer and low-income service organization participation in the program." Va. Code § 56-594.3(F)(3). Based on the plain language of the Shared Solar Statute, the regulations should contemplate a stakeholder process to address issues relating to low-income eligibility. Unfortunately, the proposed regulations do not reference this requirement.

This stakeholder process is very important as it is an opportunity to listen to the community that the General Assembly intended this shared solar program to serve. As the Board stated in the Board's July Comments, low-income communities are best served when they are engaged in the process of developing the programs that serve them and a stakeholder process is the best way to do this.[6] Ideally this stakeholder process would result in a product that the Commission could use to inform Commission guidelines. The Board would eagerly assist and join any such stakeholder process. The Board recommends the Commission revise the regulations to include a stakeholder working group to facilitate low-income customer and low-income service organization participation in the program. The Board also recommends that the Commission adopt the Board's suggestions from the Board's July Comments as to the issues to be addressed through the stakeholder process in the final regulations or subsequent Commission guidance.

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[5] *See* Heeter, Jenny, Lori Bird, Eric O'Shaughnessy, & Sam Koebrich, Design and Implementation of Community Solar Programs for Low and Moderate-Income Customer, National Renewable Energy Laboratory 28-29 (Dec. 2018), https://www.nrel.gov/docs/fy19osti/71652.pdf (hereinafter NREL: Design and Implementation of Community Solar Programs) (describing challenges to enrolling participants if eligibility requirements are complex); *see also* Shared Renewable Energy for Low- to Moderate-Income Consumers: Policy Guidelines and Model Provisions, Interstate Renewable Energy Council 8-9 (2016), https://irecusa.org/publications/shared-renewable-energy-for-low-to-moderate-income-consumers-policy-guidelines-and-model-provisions/ (explaining the difficulties in signing up low-income customers in the Colorado Community Solar Gardens program).

[6] *See generally*, Clean Energy States Alliance, *et. al*., Solar with Justice: Strategies for Powering Up Under-Resourced Communities and Growing an Inclusive Solar Market, 7 (Dec. 2019), https://www.cesa.org/resource-library/resource/solar-with-justice/ (stating that partnerships involving trusted community organizations are essential and installations for community institutions deserve special consideration as two of the top ten findings and recommendations in the report).

C. Regulations Do Not Include Mechanisms to Ensure Low-Income Customer Participation.

The Shared Solar Statute states that "[t]he Commission, in collaboration with the Department of Mines, Minerals and Energy, may adopt mechanisms to ensure low-income customer participation." Va. Code § 56-594.3(E). The proposed regulations do not reflect any mechanisms to ensure low-income customer participation. The Shared Solar Statute provided the Commission with an opportunity to work with the Department of Mines, Minerals and Energy ("DMME") to ensure low-income customer participation. It is the Board's hope that the Commission will take advantage of this opportunity to work with DMME and others to develop mechanism to ensure low-income customer participation and reflect this work in the final regulations or subsequent guidance from the Commission. The Board would be happy to assist in any such process.

D. Regulations Do Not Specify Requirements or Approval Process for Low-Income Subscription Plans.

The Shared Solar Statute states that the Commission shall approve an additional 50 MW of capacity under this program – increasing the program size from 150 MW to 200 MW – upon the determination "that at least 45 MW of the aggregated shared solar capacity in the Commonwealth have been subscribed to by low-income customers." Va. Code § 56-594.3(E). The program size of 150 MW is very small compared to other comparable programs across the country and it is of vital importance for the success of this shared solar program that the 45 MW low-income customer threshold is met swiftly such that the program may be expanded to reach more customers.

Unfortunately, the regulations do not provide clear guidance on how to trigger this expansion. The proposed regulations state that the 45 MW threshold shall be "demonstrated by the approved low-income subscription plans of projects that have secured capacity in the program." 20VAC5-340-40(L). But the proposed regulations do not provide guidance as to what these low-income subscription plans should include or the approval process. *See* 20VAC5-340-40(L); 20VAC5-340-90(A)(3). Without this guidance, the shared solar program lacks accountability for low-income customers. To ensure compliance by subscriber organizations and robust low-income participation, the Board recommends that the Commission clarify the requirements for the low-income subscription plan and the process for approval to provide certainty and accountability.

II. <u>Proposed Regulations Do Not Adequately Address Subscriber Experience</u>.

In order to have a successful and robust shared solar program, customers need to experience cost savings, certainty, and transparency. To this end, customer's bill credits should carry-over each month for an annual period, customers should be able to bring their subscriptions with them when they move, and the licensing and registration requirements should be flexible enough to allow for a robust market of subscriber organizations.

A. Bill Credits Should Roll-Over Month to Month Similar to Net Metering.

The Shared Solar Statute states that "[a]ny amount of the bill credit that exceeds the subscriber's monthly bill, minus the minimum bill, shall be carried over and applied to the next month's bill." Va. Code § 56-594.3(B)(1). Furthermore, in the definition of "Subscription" the Shared Solar Statute requires "that the estimated bill credits do not exceed the subscriber's average *annual* bill for the customer account to which the subscription is attributed." Va. Code § 56-594.3(A) (emphasis added). Yet, the proposed regulations state: "[s]uch carry-over plus the next month's credit cannot exceed the next month's bill, minus the minimum bill." 20VAC5-340-60(F)(2). This provision of the proposed regulations adds an additional requirement not found in the Shared Solar Statute and significantly decreases cost-savings for customers. The bill credits for shared solar should work the same way as they do for net metering in Virginia in that the bill credits should be carried over and applied to the next month for a twelve-month period. *See* Va. Code § 56-594. The Board recommends that the Commission revise the regulations to adhere to the Shared Solar Statute and to clarify that the bill credits should carry over each month for an annual period.

B. Regulations Do Not Specify the Transferability of Subscriptions.

The Shared Solar Statute specifically requires the Commission to "allow for the transferability and portability of subscriptions." Va. Code § 56-594.3(F)(6). This requirement gives flexibility to subscribers to retain their subscription and bill credits if they continue to be Dominion customers. By contrast, the Commission's proposed regulations allow subscriber organizations to "re-enroll" customers, but this is different from allowing customers to retain their subscriptions. 20VAC5-340-50(H). Allowing a customer to re-enroll instead of transferring their subscription means that the customer may lose their previously generated bill credits when they move instead of allowing the credits to carry-over to the new address. The Board recommends that the Commission revise the regulations to adhere to the Shared Solar Statute and to clarify that customers can transfer their subscriptions to their new address as long as they continue to be Dominion customers.

C. Regulations May Prohibit Qualified Project Developers and Operators from becoming Subscriber Organizations.

The Shared Solar Statute defines "Subscriber organization" as "any for-profit or nonprofit entity that owns or operates one or more shared solar facilities." The proposed regulations provide additional financial requirements in 20VAC5-340-30 regarding the licensing of such subscriber organizations. The Board is concerned that the proposed licensing requirements set forth in 20VAC5-340-30 would not allow for small companies and non-profits to participate as project developers and operators. For example, certain non-profits such as Groundswell, GRID Alternatives and Power52 have strong track records of successfully working with low-income customers in community solar programs across the country, but based on the proposed licensing requirements these organizations likely would be unable to enter into the Virginia market. The Board recommends revising the regulations to allow for smaller companies and non-profits to

become subscriber organizations with appropriate consumer protections as contemplated by the Shared Solar Statute, thereby creating more competition, consumer choice, and transparency in this new market.

III. Board Recommendations.

The following is a summary of the Board's recommendations. The Board recommends that the Commission revise the proposed regulations to:

- Include a stakeholder process to facilitate low-income customer and low-income service organization participation in the program as required by law.
- Include a mechanism to ensure low-income enrollment and work with DMME to achieve this statutorily mandated goal.
- Include a framework to verify low-income eligibility as originally outlined in the Board's July Comments or reference in the regulations that such framework will be developed through a stakeholder process.
- Include requirements and approval process for low-income subscription plans.
- Revise regulations to specify that bill credits carry-over every month for a twelve (12) month period.
- Revise regulations to allow for the transferability and portability of subscriptions as required by law.
- Revise licensing requirements in regulations to allow for smaller companies and non-profits to participate as subscriber organizations as contemplated by the law.

The Board understands that the Shared Solar Statute imposes a time limit on the Commission for drafting regulations. As a result, we alternatively suggest that the Commission could address several of these points in the future through guidance documents. Specifically, the Commission could publish a guidance document in the future with a framework for low-income eligibility verification based on input from a stakeholder process and DMME.

IV. Conclusion.

The Commission has an opportunity to implement a strong shared solar program that allows Virginia to become a national leader for low- and moderate-income participation in shared solar. By law, these regulations should "reasonably allow for the creation of shared solar facilities" but as proposed, these regulations fall short. Va. Code § 56-594.3(F)(1). The proposed regulations are vague and do not provide a clear path for a successful program, especially for low-income customers. The Commission does not need to re-create the wheel with these regulations. Instead the Commission should look to other states with successful programs and the expertise that already exists in the Commonwealth on these issues. The Commission should revise the proposed regulations and finalize robust and detailed regulations that would provide accountability, uniformity and certainty to customers, subscriber organizations, and Dominion.

We appreciate your consideration of these comments. If you need any further information about the role the Board plays in promoting clean energy options for low- to moderate-income

customers in Virginia, or the importance of the shared solar regulations, please contact me at 434-220-7595 or hannah.coman@apexcleanenergy.com.

Sincerely,

Hannah Coman
Chair

Appendix I: Comments to the Commission on Multi-Family Shared Solar, PUR-2020-00124, dated July 24, 2020, and November 2, 2020

Virginia Clean Energy Advisory Board

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July 24, 2020

Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
Tyler Building – First Floor
1300 East Main Street
Richmond, Virginia 23219

Subject: Case Number PUR-2020-00124

Dear Mr. Peck:

The Virginia Clean Energy Advisory Board (the Board) respectfully submits this letter as the comments of the Board to the State Corporation Commission (Commission) in the above-referenced proceeding. The Commission has opened this proceeding to receive comments from interested parties to inform regulations for a new shared solar program available to multi-family customers of Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion") and Kentucky Utilities Company d/b/a Old Dominion Power Company ("ODP") pursuant to § 56-585.1:12 of the Virginia Code.[1] The Board appreciates the opportunity to provide comments on this very important opportunity to increase access to solar energy for low- and moderate-income Virginians in Dominion and ODP's territory.

In 2019 the Virginia General Assembly passed HB 2741 establishing the Board as an advisory board in the executive branch of state government.[2] The stated purpose of the Board is to establish a pilot program for disbursing loans or rebates for the installation of solar energy infrastructure in low-income and moderate-income households through the Low-to-Moderate Income Solar Loan and Rebate Fund. Further, in accordance with the Board's mission statement, "all actions and recommendations of the Board shall be for the purpose of expanding access to cost-effective clean energy for low- and moderate-income Virginians throughout the

[1] Order Directing Comment, Va. State Corp. Comm'n, Docket No. PUR-2020-00124, at 1 (July 1, 2020), https://scc.virginia.gov/docketsearch/DOCS/4nsj01!.PDF.
[2] HB 2741 (Mar. 18, 2019), https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0554.

Commonwealth, including citizens living in both single- and multi-family housing facilities and in rural or economically disadvantaged communities."[3]

With the recent passage of the Virginia Clean Economy Act and Governor Northam's Clean Energy Virginia initiative, Virginia is on the path to fundamentally transform the state's electricity generation and grid. The Board's mission is to ensure that low- and moderate-income Virginians are not left behind in this energy transition. A successful multi-family shared solar program is one way to allow low- and moderate-income Virginians to access solar energy and participate in Virginia's energy transition.

Many residential and non-residential electricity customers face significant challenges to installing rooftop solar including: up-front and maintenance costs of the system; suboptimal roof orientation or structural constraints; and shading from trees or other buildings. For renters, residents of multi-family buildings, and low- to moderate income customers, shared solar programs offer customers the opportunity to invest in solar in a way that fits their budgets, and derive some of the benefits (such as lowering monthly electric bills and energy burdens), while a third-party entity is responsible for building and maintaining the solar facility and ensuring the benefits are attributed to participating customers.

This year the Virginia General Assembly passed Chapters 1188 (HB 572), 1189 (HB 1184), 1239 (HB 1647), and 1187 (SB 710) of the 2020 Virginia Acts of Assembly requiring the Commission to establish by regulation a program affording Dominion and ODP customers who live in multi-family housing the opportunity to participate in shared solar projects, often referred to as shared solar programs. This new legislation, codified as § 56-585.1:11 of the Virginia Code (the "Code"), allows multi-family customers to subscribe for a specific amount of electricity generated by a solar facility to offset their energy usage from their utility. Unlike the shared solar bill codified as § 56-594.3 of the Code, this multi-family shared solar program does not include a minimum bill requirement and does not contain a low-income customer exemption.

Although this program does not contain a low-income customer exemption, low-income customers should be encouraged to participate. ODP serves an area of the state where between 18.5 percent and 25.4 percent of residents live in poverty[4] and these residents spend a much larger percentage of their income on their energy bills than residents in other parts of the state.[5] In addition, since ODP is exempted from the Virginia Electric Utility Restructuring Act[6] it is not

[3] Clean Energy Advisory Board, 2019 Annual Report (Jan. 8, 2020) at 4, *available at*: https://www.dmme.virginia.gov/de/LinkDocuments/Clean%20Energy%20Advisory%20Board/Reports/2019%20Annual%20Report%20FINAL.pdf

[4] Small Area Income and Poverty Estimates (SAIPE), Census.gov, https://www.census.gov/data-tools/demo/saipe/#/?map_geoSelector=aa_c&s_state=51&s_year=2018&s_county=51051,51105,51167,51169,51195 (Percent in poverty in Dickenson, Lee, Russell, Scott, and Wise counties based on 2018 data).

[5] Low-Income Energy Affordability Data Tool, Office of Energy Efficiency & Renewable Energy, U.S. Dep't of Energy, https://www.energy.gov/eere/slsc/maps/lead-tool (indicating 3-5% of income is spent on energy bills in ODP territory based on census tract data in comparison to an average of 2% statewide); Affordable Clean Energy Project, Virginia Poverty Law Center, https://vplc.org/affordable-clean-energy-project/ (indicating 5-8.2% of income is spent on energy bills in ODP territory based on zip code level data in comparison to an average of 3.1% statewide).

[6] Va. Code § 56-580(G).

required to offer programs to help customers reduce their energy usage, which means that there are very few opportunities for customers to lower their bills. This multi-family shared solar program is one important avenue for customers to lower their energy bills.

In developing these regulations, the Commission does not have to reinvent the wheel. Many other states have already established similar, successful projects.[7] Below is a high-level overview of issues to be addressed in the regulations and suggestions regarding lessons learned and best practices gleaned from pertinent resources. This is not an exhaustive issues list, but we encourage the Commission to consider and incorporate these points when drafting the multi-family shared solar regulations.

I. The Commission should adopt a broad definition of "Subscriber."

The term "subscriber" is defined in the statute as "a multi-family customer of an investor-owned electric utility that owns one or more subscriptions of a shared solar facility that is interconnected with the utility." The Commission should adopt a broad interpretation of this definition. A multi-family customer should be a residential customer who lives in a building that contains more than one single-family dwelling unit. In addition, this term should also include multi-family housing building owners who then can subscribe for electricity to power shared common areas and offices within the multi-family building. The Commission should also consider allowing multi-family housing facilities to subscribe on behalf of their tenants and pass the benefits on to their tenants directly or through tangible benefits to the tenants.[8] This has been successful in many other programs because the building landlord is a trusted party who can facilitate enrollment and it addresses high turn-over rates, which can be a problem with renters.[9]

II. Customers should bear no financial risk by subscribing.

Customers should bear little to no financial risk by signing up for this multi-family shared solar program. The statute requires that any rule or utility implementation filing adopt standardized consumer disclosure forms.[10] This is a necessary first-step in ensuring strong consumer protection provisions. Consumers should also be provided upfront information about

[7] California's Solar on Multifamily Affordable Housing program appears to be very similar and could be a helpful model. https://calsomah.org/vnm-toolkit/. In addition, Austin, Texas has a multifamily shared solar pilot program. https://austinenergy.com/ae/green-power/solar-solutions/for-your-multifamily/mf-shared-solar.

[8] Heeter, Jenny, Lori Bird, Eric O'Shaughnessy, & Sam Koebrich, Design and Implementation of Community Solar Programs for Low and Moderate-Income Customer, National Renewable Energy Laboratory 8 (Dec. 2018), https://www.nrel.gov/docs/fy19osti/71652.pdf (hereinafter NREL: Design and Implementation of Community Solar Programs) ("In Rhode Island, direct bill crediting is not required, but policy requires building owners to provide tenants with 'tangible benefits' such as free Wi-Fi or improvements in common spaces.")

[9] *Id*. at 10, 12. The Public Housing Agency of the City of St. Paul, Minnesota, is working with Geronimo Energy to subscribe 100 percent of their electricity use at 10 high-rise facilities, and in so doing is expecting to save $130,000 per year, or $3.25 million over 25 years. *Id*. at 12. In addition, the Denver Housing Authority is developing a community solar project in which it is also acting as a subscriber and Rhode Island and Connecticut also allow affordable housing units to subscribe to low to moderate income community solar. *Id*. at 10, 12.

[10] SB 710 (1)(E)(6).

billing and pricing terms, summaries of any charges, information about any potential changes to charges, conditions of services, any penalties, and how credits are calculated.[11] Further, the consumer disclosure form should guarantee bill savings for all subscribing customers. In drafting these regulations the Board recommends that the Commission review the contract disclosure requirements included in the rules for the community solar programs in Maryland and Minnesota.[12]

III. Regulations should be informed by a robust stakeholder process or technical conference.

Communities are best served when they are engaged in the process of developing the programs that serve them.[13] The Board encourages the Commission to hold a stakeholder process or technical conference in order to ensure that these regulations address these specific communities. This process should address at a minimum the following issues:

1. Outreach for enrollment and on-going communication after enrollment to improve customer experience;
2. How to increase low-income customer participation;
3. How the guaranteed bill savings should be measured (monthly vs. annually, baseline to be used, etc.);
4. The reasonable cost for the utility to administer the program and how this should be recovered;
5. Address the co-location of two or more shared solar facilities on a single parcel of land, and provide guidelines for determining when two or more facilities are colocated;
6. Whether customers who live in HUD-assisted properties will be able to participate in the multi-family shared solar program, and if not what percentage of multi-family residents are in HUD-assisted properties, and how best to address this problem;[14] and

[11] Chase, Diana & Nate Hausman, Consumer Protection for Community: A Guide for States, Clean Energy States Alliance and U.S. Dep't of Energy Sun Shot Initiative, 20 (June 2017), https://www.cesa.org/resource-library/resource/consumer-protection-for-community-solar-a-guide-for-states/.

[12] *Id*.

[13] *See generally*, Clean Energy States Alliance, *et. al*., Solar with Justice: Strategies for Powering Up Under-Resourced Communities and Growing an Inclusive Solar Market, 7 (Dec. 2019), https://www.cesa.org/resource-library/resource/solar-with-justice/ (stating that partnerships involving trusted community organizations are essential and installations for community institutions deserve special consideration as two of the top ten findings and recommendations in the report).

[14] Federal housing law requires that a residents' share of payments to reside in a HUD-assisted housing property must equal 30 percent of the household's monthly income. The payments are defined as a combination of rent and estimated utility expenses, known as utility allowances. As a result, when solar power reduces a resident's electric utility bill, HUD requires that the resident's rent increases accordingly -- erasing the financial benefit of solar to low-income households. Seth Mullendore, Clean Energy Group, Housing Department Decision Will Bring Solar Benefits to Low-Income Households in California (Aug. 16, 2019), https://www.cleanegroup.org/housing-department-decision-will-bring-solar-benefits-to-low-income-households-in-california/. Last year HUD issued a memorandum that fixes this problem but it only applies to HUD-assisted properties in California's Solar on

7. The type of tangible benefits the multi-family housing facilities should provide to tenants from their bill savings.

IV. Further Recommendations.

To date the Board has focused on single-family clean energy access structures because before the General Assembly passed this statute those were the only options for low- and moderate-income households. This multi-family shared solar program provides an avenue to expand renewable energy access to customers who cannot install solar on their homes. If this program is successful it will contribute towards achieving Virginia's 100 percent zero-carbon energy goals while also providing customers with the added benefit of bill reductions.

The Board has confined these comments to the issues that most directly impact low-income customers who may participate. But the Board believes that in order for this program to be successful it must be financially attractive to potential subscribers. Unless the Commission keeps the utility's administrative costs and interconnection fees low, these shared solar facilities will not be financeable and will not be built.

As referenced above, a robust stakeholder process to address participation is important to establish program guidelines that ensure customer enrollment. This stakeholder process could be a subset of the stakeholder process required by § 56-594.3 of the Code. The Board is ready and willing to work with and assist in this process this fall. If this recommendation is adopted, the Board respectfully requests an invitation to participate in the stakeholder process as it is extremely relevant to our ongoing work in this space. The Board specifically hopes to add value by ensuring that this shared solar program complements other existing programs for low-income customers.

V. Conclusion.

In conclusion, the Commission has the opportunity to help ensure that low-income customers are not left behind in the energy transition. This program is one way to increase access to affordable, clean energy for those communities who need it the most. We encourage the Commission to adopt best practices as recommended by leading national clean energy organizations such as National Renewable Energy Laboratory, Clean Energy States Alliance and

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Multifamily Affordable Housing (SOMAH program). This memorandum states that the solar credits allocated through the SOMAH program are an "incidental benefit" and should not be included in the calculation of the household's income and should not be included in the household's utility allowances. Therefore, SOMAH participants who live in HUD-assisted properties would be able to financially benefit from the cost savings of the shared solar program. U.S. Dep't of Housing and Urban Development, Memorandum re the Treatment of Solar Virtual Net Energy Metering Credits on Tenant Utility Bills (July 8, 2019), https://www.cleanegroup.org/housing-department-decision-will-bring-solar-benefits-to-low-income-households-in-california/. Note that HUD-assisted properties that are master-metered for electricity are not eligible to participate in the SOMAH program.

Interstate Renewable Energy Council, and develop a stakeholder process to allow further involvement in developing these processes.

We appreciate your consideration of these comments. If you need any further information about the role the Board plays in promoting clean energy options for low- to moderate-income customers in Virginia, or the importance of the shared solar regulations, please contact me at 434-977-4090 or hcoman@selcva.org.

Sincerely,

Hannah Coman
Chair

Virginia Clean Energy Advisory Board

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November 2, 2020

Mr. Joel H. Peck, Clerk
c/o Document Control Center
State Corporation Commission
Tyler Building – First Floor
1300 East Main Street
Richmond, Virginia 23219

Subject: Case Number PUR-2020-00124

Dear Mr. Peck:

The Virginia Clean Energy Advisory Board (the Board) respectfully submits this letter as the comments of the Board to the State Corporation Commission (Commission) in the above-referenced proceeding. The Commission opened this proceeding to receive comments from interested parties to inform regulations for a new shared solar program available to multi-family customers of Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion") and Kentucky Utilities Company d/b/a Old Dominion Power Company ("ODP") pursuant to § 56-585.1:12 of the Virginia Code (the "Multi-family Shared Solar Statute").[1] The Board submitted comments on July 24, 2020 in this docket highlighting important issues to be addressed in the regulations (the "Board's July Comments") and the Board submits comments today on the Commission's proposed regulations. The Board appreciates the opportunity to provide comments on this very important opportunity to increase access to solar energy for low- and moderate-income Virginians in Dominion and ODP's territory. This shared solar program is even more important now as COVID-19 has left an unprecedented number of customers with arrearages and shared solar is an opportunity for customers to receive bill savings.

In 2019 the Virginia General Assembly passed HB 2741 establishing the Board as an advisory board in the executive branch of state government.[2] The Board's mission is to ensure that low- and moderate-income Virginians can access cost-effective clean energy and are not left

[1] Order Directing Comment, Va. State Corp. Comm'n, Docket No. PUR-2020-00124, at 1 (July 1, 2020), https://scc.virginia.gov/docketsearch/DOCS/4nsj01!.PDF.
[2] HB 2741 (Mar. 18, 2019), https://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0554.

behind in Virginia's clean energy transition. Many residential and non-residential electricity customers face significant challenges to installing rooftop solar including: up-front and maintenance costs of the system; suboptimal roof orientation or structural constraints; and shading from trees or other buildings. For renters, residents of multifamily buildings, and low- to moderate income customers, shared solar programs offer customers the opportunity to invest in solar in a way that fits their budgets, and derive some of the benefits (such as lowering monthly electric bills and energy burdens), while a third-party entity is responsible for building and maintaining the solar facility and ensuring the benefits are attributed to participating customers. As a result, the Board's mission includes supporting robust shared solar programs that are broadly available, especially to low- and moderate-income Virginians.

Although the Multi-family Shared Solar Statute does not contain specific provisions for low-income customers, the Board believes that low-income customers should be encouraged to participate. ODP serves an area of the state where between 18.5 percent and 25.4 percent of residents live in poverty[3] and these residents spend a much larger percentage of their income on their energy bills than residents in other parts of the state.[4] In addition, since ODP is exempted from the Virginia Electric Utility Restructuring Act[5] it is not required to offer programs to help customers reduce their energy usage, which means that there are very few opportunities for customers to lower their bills. This multi-family shared solar program is one important avenue for customers to lower their energy bills.

As we did in our original comments, the Board has confined these comments to the issues most directly impacting low-income customers. However, the Board still believes that for this program to be successful for low-income customers, it also needs to be financially attractive to potential subscribers who are not low-income customers. As a result, the bill credits need to provide savings to all subscribers, and this can only be achieved by having low administrative charges. As set forth in these proposed regulations, it is unclear whether this program will result in monetary savings for subscribers.

The Board understands that the Multi-family Shared Solar Statute mandates a tight turnaround time for these regulations. However, we believe that to have a successful program the following issues need to be addressed at a minimum whether here in regulations or in subsequent guidance issued by the Commission.

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[3] Small Area Income and Poverty Estimates (SAIPE), Census.gov, https://www.census.gov/data-tools/demo/saipe/#/?map_geoSelector=aa_c&s_state=51&s_year=2018&s_county=51051,51105,51167,51169,51195 (Percent in poverty in Dickenson, Lee, Russell, Scott, and Wise counties based on 2018 data).

[4] Low-Income Energy Affordability Data Tool, Office of Energy Efficiency & Renewable Energy, U.S. Dep't of Energy, https://www.energy.gov/eere/slsc/maps/lead-tool (indicating 3-5% of income is spent on energy bills in ODP territory based on census tract data in comparison to an average of 2% statewide); Affordable Clean Energy Project, Virginia Poverty Law Center, https://vplc.org/affordable-clean-energy-project/ (indicating 5-8.2% of income is spent on energy bills in ODP territory based on zip code level data in comparison to an average of 3.1% statewide).

[5] Va. Code § 56-580(G).

I. Regulations Impose Additional, Arbitrary Restrictions on Participation.

As proposed, the regulations impose additional restrictions on participation that arbitrarily restrict potential subscribers and limit the potential success of this program.

A. Definition for "Multi-family customer" Arbitrarily Restricts Participation.

The proposed regulations define "Multi-family customer" as "an investor-owned utility customer residing in an apartment or condominium complex with at least three individually metered residences." 20VAC5-342-20. This definition is not in the Multi-family Shared Solar Statute and arbitrarily restricts participation. For example, the proposed definition prohibits residents of duplexes from participating in this program. As stated in the Board's July Comments, the Board believes a multi-family customer should be a utility customer for a building with more than one individually metered residence – including duplexes and apartment buildings. In addition, this proposed definition requires that the customer "reside" in the residence. Again, this is not required by the Multi-family Shared Solar Statute. This requirement prevents multi-family housing building owners who do not live in the building from subscribing for electricity to power shared common areas and offices within the multi-family building. This also prevents building owners from subscribing on behalf of their tenants and passing these benefits on to their tenants directly or through tangible benefits to the tenants. It is also unclear under this definition whether a customer that is a limited liability company or other corporate entity could participate in the program. The Board recommends that the Commission revise this provision to allow for customers in buildings with more than one individually metered residence to participate and to allow for building owners (including corporate entities) to participate as recommended in the Board's July Comments.

B. Regulations Need to Apply to Dominion and ODP.

The proposed regulations should be revised to clarify that they apply to both Dominion and ODP. The statute clearly applies to both Dominion and ODP.[6] Va. Code § 56-585.1:12(A). By contrast, the proposed regulations state: "The provisions of this chapter apply to *Phase II utilities*, including, notwithstanding subsection G of § 56-580, any investor-owned utility whose service territory assigned to it by the Commission is located entirely within the Counties of Dickenson, Lee, Russell, Scott and Wise, subscriber organizations, and subscribers, and govern the development of shared solar facilities and participation in the multi-family shared solar program." (emphasis added) 20VAC5-342-10. However, ODP is not a Phase II utility as defined in Va. Code § 56-585.1. Therefore, the Board recommends that the Commission clarify and revise this section of the regulations to mirror the legislation, which clearly states that ODP is subject to this law.

[6] The statute states: "Investor-owned utility" means "each investor-owned utility in the Commonwealth including, notwithstanding subsection G of § 56-580, any investor-owned utility whose service territory assigned to it by the Commission is located entirely within the Counties of Dickenson, Lee, Russell, Scott and Wise. "Investor-owned utility" does not include a Phase I Utility, as that term is defined in subdivision A 1 of § 56-585.1." Va. Code § 56-585.1:12(A).

II. Proposed Regulations Do Not Adequately Address Subscriber Experience.

In order to have a successful and robust multi-family shared solar program, customers need to experience cost savings, certainty, and transparency. To this end, customer's bill credits should carry-over each month in perpetuity, customers should be able to bring their subscriptions with them when they move, and the licensing and registration requirements should be flexible enough to allow for a robust market of subscriber organizations.

A. Bill Credits Should Roll-Over Month to Month in Perpetuity.

The Multi-family Shared Solar Statute states that "[a]ny amount of the bill credit that exceeds the subscriber's monthly bill shall be carried over and applied to the next month's bill *in perpetuity*" (emphasis added). Va. Code § 56-585.1:12(C). By contrast, the proposed Multi-family Shared Solar regulations require "[s]uch carry-over plus the next month's credit cannot exceed the next month's bill." Va. Code § 56-585.1:12(F)(2). This provision of the proposed regulations is contrary to the plain language of the Multi-family Shared Solar Statute and significantly decreases cost-savings for customers. Moreover, the Multi-family Shared Solar statute and the proposed regulations each have language requiring a subscription to "be sized such that the estimated bill credits do not exceed the subscriber's average annual bill for the customer account to which the subscription is attributed," thereby already limiting the amount of bill credits annually. Va. Code § 56-585.1:12(A); 20VAC5-342-20. The regulations should not add additional requirements that adversely impact the customers' cost savings. The Board recommends that the Commission should clarify that the multifamily shared solar bill credits must be carried over and applied to the next month's bill *in perpetuity*, as required by the statute.

B. Regulations Add Additional Costs Not Contemplated in the Multi-family Shared Solar Statute.

The Multi-family Shared Solar Statute states that the investor-owned utilities should be allowed "to recover reasonable costs of administering the program." Va. Code § 56-585.1:12(E)(7). But, unlike Dominion's shared solar program (established pursuant to § 56-594.3 of the Virginia Code), which includes a minimum bill, the Multi-family Shared Solar Statute does not contemplate any other costs. Furthermore, the Multi-family Shared Solar Statute and proposed regulations state that "[t]he applicable bill credit rate shall be set such that the shared solar program results in robust project development and shared solar program access for all customer classes." Va. Code § 56-585.1:12(A); 20VAC5-342-20.

Yet, the proposed regulations establish four general categories of costs that must be included at a minimum in the "administrative charge."[7] 20VAC5-342-80. These are the same costs that are considered under Dominion's shared solar program as part of a minimum bill, but a

[7] The regulations state that the "administrative charge established annually must include, at a minimum, the following four general categories of costs": (a) transmission and distribution costs; (b) standby generation and balancing costs; (c) Non-bypassable charges established by the commission or otherwise by law; and (d) Other administrative costs, including but not limited to, any banking, balancing, and storing fees related to the utility's processing and handling of the excess bill credits." 20VAC5-342-80.

minimum bill is not contemplated in the Multi-family Shared Solar Statute. Arguably the plain language of the two statutes indicate that the General Assembly decided to include a minimum bill in Dominion's shared solar program but purposefully did not include this concept in the Multi-family Shared Solar Statute.

These additional costs contemplated by the proposed regulations are not based on the language in the Multi-family Shared Solar Statute. The Board recommends that the Commission revise the regulations to remove reference to the four categories of costs and limit costs to the reasonable costs of administering the program in accordance with the statute or, in the alternative, state that the administrative charge "*may* include" instead of "*must* include" the four general categories of costs.

C. Regulations Do Not Specify the Transferability of Subscriptions.

The Multi-family Shared Solar Statute specifically requires the Commission to "allow for the transferability and portability of subscriptions." Va. Code § 56-585.1:12(E)(4). This requirement gives flexibility to subscribers to retain their subscription and bill credits if they continue to be Dominion or ODP customers, respectively. By contrast, the Commission's proposed regulations allow subscriber organizations to "re-enroll" customers, but this is different from allowing customers to retain their subscriptions. 20VAC5-342-50(H). Allowing a customer to re-enroll instead of transferring their subscription means that the customer may lose their previously generated bill credits when they move instead of allowing the credits to carry-over to the new address. The Board recommends that the Commission revise the regulations to adhere to the Multi-family Shared Solar Statute and to clarify that customers can transfer their subscriptions to their new address as long as they continue to be Dominion or ODP customers, respectively.

D. Regulations May Prohibit Qualified Project Developers and Operators from becoming Subscriber Organizations.

The Multi-family Shared Solar Statute defines "Subscriber organization" as "any for-profit or nonprofit entity that owns or operates one or more shared solar facilities." The proposed regulations provide additional financial requirements in 20VAC5-342-30 regarding the licensing of such subscriber organizations. The Board is concerned that the proposed licensing requirements set forth in 20VAC5-342-30 would not allow for small companies and non-profits to participate as project developers and operators. For example, certain non-profits such as Groundswell, GRID Alternatives and Power52 have strong track records of successfully working with customers in community solar programs across the country, but based on the proposed licensing requirements these organizations likely would be unable to enter into the Virginia market. The Board recommends revising the regulations to allow for smaller companies and non-profits to become subscriber organizations with appropriate consumer protections as contemplated by the Multi-family Shared Solar Statute, thereby creating more competition, consumer choice, and transparency in this new market.

E. Regulations Should Allow Marketing Before Interconnection.

The marketing rules set forth in the proposed regulations prohibit subscriber organizations from marketing the projects before the project has an interconnection agreement. 20VAC5-342-50. However, since the project needs to be sited on the premises of the multi-family utility customer or adjacent thereto, in many cases the subscriber organization will need the property owner's permission to initiate the interconnection process. As a practical matter, the owner and residents of the multi-family building will need to be convinced of the concept before a project is developed on the site. The Board recommends revising the regulations to reflect that marketing may occur before an interconnection agreement.

III. Board Recommendations.

The following is a summary of the Board's recommendations. The Board recommends that the Commission revise the proposed regulations to:

- Revise definition of "Multi-family customer" to not arbitrarily limit subscriber eligibility.
- Revise regulations to clarify that they apply to ODP.
- Revise regulations to specify that bill credits carry-over in perpetuity as required by law.
- Revise regulations to allow for the transferability and portability of subscriptions as required by law.
- Revise licensing requirements in regulations to allow for smaller companies and non-profits to participate as subscriber organizations as contemplated by the law.
- Revise marketing restrictions to allow marketing prior to submitting the interconnection agreement.

The Board understands that the Multi-family Shared Solar Statute imposes a time limit on the Commission for drafting regulations. As a result, we alternatively suggest that the Commission could address several of these points in the future through guidance documents.

IV. Conclusion.

The Commission has an opportunity to implement a strong multi-family shared solar program and to help ensure that low-income customers are not left behind in the energy transition. By law, these regulations should "reasonably allow for the creation of shared solar facilities" but as proposed, these regulations fall short. Va. Code § 56-585.1:12(E)(4). The proposed regulations do not adhere to the statute and do not provide a clear path for a successful program, especially for low-income customers. The Commission does not need to re-create the wheel with these regulations. Instead the Commission should look to other states with successful programs and the expertise that already exists in the Commonwealth on these issues. The Commission should revise

the proposed regulations and finalize robust and detailed regulations that would provide accountability, uniformity and certainty to customers, subscriber organizations, and the utilities.

We appreciate your consideration of these comments. If you need any further information about the role the Board plays in promoting clean energy options for low- to moderate-income customers in Virginia, or the importance of the shared solar regulations, please contact me at 434-220-7595 or hannah.coman@apexcleanenergy.com.

Sincerely,

Hannah Coman
Chair