COALITION FOR COMMUNITY SOLAR ACCESS
1133 15th Street, NW | 12th Floor
Washington, DC 20005
202-540-9162 | info@communitysolaraccess.org
communitysolaraccess.org

Via electronic submission to rule.comments@bpu.nj.gov

TO:
Aida Camacho
Secretary
New Jersey Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314, CN 350,
Trenton, New Jersey 08625

FROM:
Brandon Smithwood
Policy Director
Coalition for Community Solar Access (CCSA)
Ph: 978-869-6845
Email: brandon@communitysolaraccess.org

July 31st, 2018

RE: Development of a community solar pilot program, BPU Docket No. Q018060646

Dear Secretary Camacho,

Enclosed please find the comments of the Coalition for Community Solar Access pursuant to the notice released by the BPU's Office of Clean Energy on July 6th, 2018.

/s/ Brandon Smithwood
Policy Director
Coalition for Community Solar Access (CCSA)

Introduction

The Coalition for Community Solar Access (CCSA) appreciates the opportunity to participate in the June 24, 2018 stakeholder meeting and provide these comments in response to the Board of Public Utilities' (Board or BPU) July 6, 2018 Notice in Docket No. QO18060646.

CCSA is a national coalition of businesses and non-profits working to expand customer choice and access to solar for all American households and businesses through community solar. Our mission is to empower every American energy consumer with the option to choose local, clean, and affordable community solar. We work with customers, utilities, local stakeholders, and policymakers to develop and implement policies and best practices that ensure community solar programs provide a win for all, starting with the customer.

In our answers below CCSA outlines the elements for a successful program, based on current dynamics in the New Jersey renewable energy market and based on best practices developed in other states with community solar programs. CCSA recommends a 450MW program over three years, with load apportioned among the distribution utilities and reserving 15% of the program for low- and moderate-income projects. Customers should receive a full retail rate credit and projects should have access to Class I RECs, as it is unlikely that SREC capacity will be available for the pilot program given the pipeline of SREC-eligible projects currently in place in the state. In order to ensure cost effective projects, and in recognition of the constraints on the availability of sites able to host a community solar system, the program should allow for projects to be sited on locations outside of already developed properties, particularly given the best practices in land stewardship that have been developed elsewhere and could be used in this program.

Siting and Project Size

Summary: New Jersey will benefit from a robust community solar pilot program that makes meaningful progress toward access to solar for all New Jerseyans. CCSA suggests that a three year pilot with a capacity of at least 450 MWac, or just under 1% of New Jersey's annual electricity consumption. This would enable a successful pilot, respond to the significant amount of customer interest, and provide New Jerseyans with expanded clean energy opportunities in the near term and cost-effective progress towards the state's clean energy goals. Indeed, this capacity would constitute less than 20% of the existing behind the meter solar and only 4% of the additional solar the state needs to reach its 50% by 2030 target. This program is also equal to- or smaller than- similar programs in other leading Northeastern states where solar markets are not nearly as mature as New Jersey's. Finally, and critically, an initial program of this size - when paired with our compensation and sitting recommendations - would not have a significant rate impact to NJ customers or utilities.

Regarding program structure, CCSA believes that capacity limits should be prescribed to each EDC based roughly on percentage of state load. Given that capacity available in the pilot program will already be divided by utility service territory, CCSA suggests keeping the program

simple and project categories to a minimum during the pilot phase to avoid over-segmentation of the program, which would disrupt investment.

Additionally, CCSA outlines why it is critical that there be flexibility in: 1) the types of locations where projects can be sited, and 2) where projects can be sited vis-à-vis subscribers and suggests ways that comfort letters, changes to technical requirements, and adders- as adopted in other states- can be used to incentivize projects on brownfields, landfills, rooftops, and other more difficult and expensive locations.

1) What should the annual Pilot Program capacity be? Please justify your answer both qualitatively and quantitatively.

CCSA proposes a 450 megawatt program over the three year term of the pilot.

C.48:3-87.11 b. (2) directs BPU to establish "an annual capacity limit for all solar energy projects under the pilot program". A minimum pilot program size of 450 MW alternating current (AC) over the three-year period is necessary to enable and drive investment for a successful pilot, provide expanded access to clean energy to New Jersey residents and businesses, and lay a foundation for the permanent program to reach its market potential by 2030.

A 450MWac pilot program represents about 20% of the current behind the meter installations and is comparable to the capacity currently being deployed for rooftop projects.[1] In setting a target Program size, it is important to consider that community solar will be the only option for a majority of customers to participate directly in solar programs. In order to truly level the playing field and create equitable opportunities for all customers, the state would need to launch a community solar program of at least 2GW in the near term.[2] However, recognizing the practical limitations of designing and implementing a new program in a short period of time, CCSA is recommending 450MW as a pragmatic, easily implementable size for this three-year pilot.[3]

All available data demonstrate that New Jersey residents and businesses face numerous obstacles in accessing clean energy and that community solar can be a solution.

- Research has shown that approximately at least **50%-75% of U.S. consumers cannot access traditional rooftop solar, either because they do not own their roof or because of technical restrictions**[4].
- Census data reveal that of the 3.19 million occupied housing units in New Jersey, 1.62 million or **51% of New Jersey residents lack access to solar simply because they**

[1] New Jersey Clean Energy Program, Solar Activity Reports, Accessed July 30, 2018, http://njcleanenergy.com/renewable-energy/project-activity-reports/project-activity-reports
[2] GTM Research, The Vision for U.S. Community Solar: A Roadmap for 2030, https://votesolar.org/policy/policy-guides/shared-renewables-policy/csvisionstudy/#reportdownload
[3] 450 MW is less than 1% of New Jersey's annual electricity consumption and would have a minimal impact on the dynamics of the New Jersey electric market. See: New Jersey Board of Public Utilities, NJ Switching Data, Accessed July 30, 2018, https://www.nj.gov/bpu/pdf/energy/edc07.pdf
[4] National Renewable Energy Lab, Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation, https://www.nrel.gov/docs/fy15osti/63892.pdf

are renters or live in multifamily buildings.[5] This suggests that at maximum 50% of New Jersey residential consumers currently have access to solar, but this number does not account for other limitations on solar that are more difficult to quantify such as roof orientation or architectural type, tree shading, and structural integrity of the roof.

- According to research firm Wood Mackenzie Power & Renewables, only 10% of interested leads are ultimately qualified for a rooftop solar system, with the remainder disqualified due to creditworthiness, roof access, shading, and other limitations to hosting a solar system. Given the nearly 100,000 customer-sited systems in the state, this suggests that the number of customers who have sought to go solar in the state is at least nine times those that have succeeded to install a system at their property. Many of these customers could be served by community solar projects.
- The recently completed Wood Mackenzie report *The Vision for U.S. Community Solar: A Roadmap to 2030* develops a long term vision for community solar in New Jersey. The analysis included a robust evaluation of the total addressable market. The report concluded that **by 2030, community solar in New Jersey could serve 219,000 to 410,000 unique subscribers at a capacity of 2.3 to 3.3 GW.** Thus, the pilot program should be of sufficient size to enable rapid scale up under the permanent program, in order to achieve this market potential and help meet the state's goals.

At less than 1% of New Jersey's annual electricity consumption, 450 MW would have a minimal impact on the dynamics of New Jersey's electricity market.[6] This amount is also less than 4% of the additional solar New Jersey needs to reach its 50% renewable energy requirement by 2030.[7] Finally and critically, this pilot program, which would be extremely cost effective paired with our compensation and sitting recommendations, would not have a significant rate impact to NJ customers or utilities.

2) How should the annual Pilot Program capacity be allocated between Electric Distribution Companies ("EDCs")? How should excess annual capacity be reallocated if not used?

It is appropriate to divide program capacity proportionally, or near-proportionally, between the Electric Distribution Companies. Allocating based on share of state-wide load is an appropriate methodology. The New Jersey Electric Switching Statistics report is one source of load information.[8] Based on the April report the division by load breaks down according to the following table. It may be appropriate to consider a minimum Pilot Program size for utilities with under 5% of load. For example, under CCSA's proposal Rockland Electric would only have 11

[5] US Census Bureau, American Community Survey, Accessed July 30, 2018, https://factfinder.census.gov/bkmk/table/1.0/en/ACS/16_1YR/S2504/0400000US34

[6] https://www.eia.gov/electricity/state/newjersey/

[7] This figure is sourced from a draft analysis on "NJ's Solar Needs for 2030", which evaluates that question preliminarily based on the new 50% RPS, existing RPS compliance through 2017, and the planned offshore wind procurements of 3500 MWac.

[8] New Jersey Board of Public Utilities, NJ Switching Data, Accessed July 30, 2018, https://www.nj.gov/bpu/pdf/energy/edc07.pdf

MW of capacity for the entire program; it may be appropriate to increase this number to ensure there are adequate opportunities for projects in that territory.

Utility	Utility Load (MW)	% of Load	Size of Pilot (MWac)
Atlantic City Electric	2,346	12%	52
Jersey Central Power & Light	6,440	32%	144
Public Service Enterprise Group	10,878	54%	243
Rockland Electric	486	2%	11

Community solar project development can proceed most efficiently when developers can be reasonably certain of their project economics upon meeting certain development milestones. That means that a program is most efficient when it makes a large amount of capacity available for developers to compete for on a first-come, first-served basis. Efficient development results in lower costs which results in greater consumer savings.

CCSA has seen allocation issues unfold in existing markets with limited annual capacity, underlining the importance of having clear rules around queuing and allocation of program capacity from the start. We would like to share some of that experience and work with BPU staff to develop queuing and allocation rules for the program that are appropriate to the New Jersey market and the Community Solar Program goals. To help minimize allocation issues, BPU should ensure each block of program capacity is large enough to support multiple projects; for example, if Rockland Electric has only 11 MW of total program capacity, it would be more efficient to make that capacity available all at once rather than dividing it into three 3.7-MW annual blocks.

If there is excess annual capacity in one utility service territory, it should be reallocated to the utility service territories (if any) where demand for the program is exceeding the allocated capacity. Reallocating capacity from utility service territories with less demand and/or more challenging development constraints to the utility service territories with more demand and/or more favorable development conditions is a reasonable way to ensure that the pilot program achieves its full capacity allocation.

3) How should the Pilot Program annual capacity limit be divided among different project categories? What should those categories be (e.g., “small”, brownfield, landfill, historic fill,” and “LMI” project types)? Please propose a breakdown of categories, with respective percentages of the annual capacity limit.

Capacity should not be divided into different project categories, aside from a 15% carve-out for low-income projects.

Given that capacity available in the pilot program will already be divided by utility service territory and limited on an annual basis, being overly prescriptive and creating too many project categories could present barriers to development and impact the pilot's uptake and overall success.

As an example, in Maryland, with a three-year pilot, four utilities and three project types, the pilot program is effectively carved up into 36 mini pilots. For the smallest utility service territory, this means only ~1 MW of capacity may be available for certain project types in certain years. More importantly, at the close of Year 1, approximately 27% of the overall Year 1 project capacity remains uncommitted, reflecting the challenges of developing projects in a balkanized pilot program. The very small capacity allocations for each "bucket" results in a high-risk scenario for developers, who may expend significant development resources only to find that they have not been awarded capacity in a particular bucket. This scenario raises costs for developers which are passed on to consumers in the form of higher subscription fees (less consumer savings), and limits the pool of developers willing to engage in such a risky market environment. A more predictable business environment supports lower-cost development, greater consumer savings and a more diverse marketplace. Over-segmentation of the program would also complicate the overall program with implementation challenges regarding what to do about allocated but unused annual, program type and utility capacity.

The single exception to specific project categories CCSA suggests is for LMI Community Solar Projects. CCSA's comments in the LMI section will propose how to create a specific program category for LMI Community Solar Projects.

4) Should co-location of solar projects be allowed? What conditions or limits should apply?

C.48:3-87.11 b.(1) directs the BPU to establish a capacity limit for an individual community solar project to a maximum of 5 MW. CCSA supports establishing 5 MW as the maximum project size under the program. A 5 MW solar project is large enough to capture some economies of scale while remaining a relatively small, distribution-level project. Setting a project capacity size at 5 MW without co-location is a more effective and cost-efficient policy choice than setting a smaller project size capacity limit and allowing co-location since the later results in increased projects costs due to separate interconnections, meters, infrastructure and time.

If BPU adopts the 5 MW project size, it would be acceptable to limit projects to one community solar project per parcel. If BPU sets a smaller size limit per project, which we do not recommend, it may be appropriate to allow some colocation of projects to allow for economies of scale needed to make some projects viable. Allowing co-location at the program level would allow for more flexibility in land use decisions by local authorities, which could choose to allow or limit co-location based on local needs.

5) What should the geographic limitations for community solar pilot projects and subscribers be (i.e. how far from the project can subscribers reside)? Please justify how

your proposal maintains the community link between project and subscribers, without compromising the feasibility of community solar pilot projects.

Projects and subscribers should be required to be within the same utility service territory, with no further limitations on proximity. This is necessary for reasonable project economics, to accommodate for interconnection constraints, to enable subscriptions to be portable, and to accommodate different types of communities.

C.48:3-87.11 a. provides clear direction to BPU to "permit customers of an electric public utility to participate in a solar energy project that is remotely located from their properties but is within their electric public utility service territory." BPU is directed in C 48:3-87.11 b. (3) to establish "geographic limitations for solar energy projects and participating customers." CCSA supports a requirement that subscribers must be located in the same utility service territory as the community solar pilot project to which they are subscribed as provided in C.48:3-87.11 a. CCSA does not believe the BPU needs to identify any additional geographic limitations.

Geographic boundaries that are smaller than the utility service territory will increase program cost and limit project availability for some subscribers. Setting the geographic limitation to the utility service territory would be the least restrictive for the purposes of the pilot, the least administratively burdensome to the EDCs and community solar developers, and would enable greater consumer savings.

The "community link" between a community solar project and subscribers is not dependent on the precise geographic location of the project in relation to the subscriber. The fact that the participant is subscribing to a specific project in his/her geographic region already (i.e. the utility service territory) creates an emotional tie and community link. While some subscribers may have preferences for projects that are closer to their home or business, others will base their choice on the broader subscription terms and conditions rather than on the location. For example, some projects may utilize a school as an anchor tenant, and market subscriptions to families of students attending the school; or a church may work with its parishioners to encourage them to sign up for a particular project. In such cases, geography is not the determining element of "community".

There is no evidence from existing programs across the country that narrower geographic restrictions than a utility service territory provide a stronger community link or a more successful project; indeed, experience suggests the opposite. A prime example of the challenges of geographic limitations comes from California. California's Enhanced Community Renewables program has failed to yield any operating projects five years after legislation was passed. Developers frequently cite the requirement that projects be within the same city, county, or within 10 miles of the subscriber as a key limitation[9]. Setting the geographic limitation as the

[9] Orion, Brian, A rough start, poissible reforms for California's community solar program, *Greentech Media April 18, 2017,* https://www.greentechmedia.com/articles/read/a-rough-start-possible-reforms-for-californias-community-solar-program#gs.aGF32Zg

utility service territory is the common best practice in other neighboring states including New York and Massachusetts.

At the July 24th Stakeholder Meeting, several parties noted the importance of siting flexibility. These included Power52's CEO, Rob Wallace, as well as the representative for Atlantic City Electric (ACE). In supporting a service-territory-wide allowance for project siting, the ACE representative noted that the limited hosting capacity on many circuits, in addition to the typical challenges of identifying hosts cites, will itself do much to limit where, as a practical matter, projects can be sited. Rob Wallace noted both the economic benefits of serving urban communities with projects located out of the urban center as well as the job training benefits that can come from having trainees work on multiple project site locations outside of the city. This is not to say that projects couldn't or won't be sited within communities and have customers in close proximity, but the pilot program should not dictate these locations beyond the requirement of being in the same service territory.

6) What land use restrictions and limitations, if any, should apply to siting community solar **pilot projects? Should siting of community solar pilot projects be restricted to certain areas? Your answer should include a specific discussion of community solar on farmland and open space. Land use restrictions will be consistent with current New Jersey statutes and regulations.**

Projects should not be restricted to certain areas and it is important that opportunities to develop on open space are allowed, with reasonable limitations to ensure the use of best practices in land management and to exclude environmentally-sensitive and preserved lands.

It is important that New Jersey take a meaningful step towards responsible siting diversity with this initial community solar program. In order for this program to be done cost effectively for New Jerseyans projects should be allowed on additional lands beyond the currently permitted rooftops, parking lots, brownfields, and landfills. Not only is the volume of available and usable rooftops, parking lots, brownfields, and landfills more constrained than it first appears when you consider usable space, landowner interest and property values, excessive contamination or unclosed sites, but most importantly development of these sites can add between $0.05-0.08/kWh of cost to projects to deal with additional equipment costs, installation work, and financing costs.[10,11]

[10] While some previous reports like the *New Jersey Department of Environmental Protection Solar Siting Analysis Update* (December 2017) have implied that NJ could site all needed solar in urban and suburban areas, this conclusion was reached without proper analysis of costs due to usable space constraints, site control limitations, interconnection technical feasibility etc, and also didn't address the additional cost.

[11] Standard additional costs for landfills and brownfields include physical constraints that require ballasted systems instead of driving piles, raised non-trenched electrical conduit and wire runs, more expensive stormwater requirements, and increased financing costs due to project complexity and risk. For rooftops, the additional costs are primarily replacing roofing, usable space constraints, and increased financing costs due to risk and complexity of site shading, access, maintenance, and building owner needs. For parking lot structures, costs are usable space constraints, additional significant structural costs for raised panels and additional snow/wind loading, and increased costs for non-trenched electrical conduit and wire runs.

In order to decrease program and participation costs for New Jersey residents and businesses, and to better understand the benefits of diverse siting for solar in coming years, the New Jersey community solar pilot program should allow projects to be sited at a variety of different types of locations across the state, including rooftops, brownfields, landfills, and parking lots when it is economically and technically feasible to do so. Additionally, development should be allowed on certain agricultural and other vacant land when it is consistent with current New Jersey and federal regulations (i.e. respecting and avoiding wetlands, conservation areas and parks) and as long as the projects follow a set of mandatory best practices for construction, decommissioning, and complementary use that have been successful in other states.

These mandatory best practices include requirements for site preparation and installation, decommissioning requirements to return sites to their original or better conditions and the requirement for decommissioning bonds to ensure the project's decommissioning requirements are met.[12,13] These requirements can be coupled with requirements for complementary uses like pollinator friendly design and plantings when on or near agricultural land. With these best practices, solar development can be done in a responsible manner with no harm and in fact often benefit to soil health, and become a land preservation tool, allowing low impact development in comparison to the many more intensive types of development that are common as farms and other conservation lands transition from older generations.

In addition, siting on agricultural and other open land extends the economic benefits of solar development to a wider class of landowners, especially farmers or other rural landowners for whom land lease payments from solar development provide a steady, reliable source of income that can mitigate some of the inherent risk associated with agriculture and stabilize a farm's finances, critically allowing cultivation on other parts of a landowners' property to remain financially viable and thus for farms to continue operations.

Thus based on all of the above, we request that an "additional allowed lands" category be added to the 4 categories referenced in BPU's question (i.e. alongside the brownfields, landfills, parking lots, and rooftops) and this category should include former or existing agricultural lands, scrublands, etc. which are often uneconomic and/or underutilized and require best practices for development. In addition, and given the below compensation proposal, we also recommend using adders as part of SREC successor program to encourage continued siting on landfills, brownfields, parking lots, and roofs.

[12] For example, mandatory best practices for site preparation and installation are often in regards to minimizing soil disruption and hydrological impact, ensuring proper spacing of the solar and minimization of concrete to allow most of the land to remain completely pervious, and minimizing tree removal and pairing this with tree planting etc.

[13] Such best practices include limitations on concrete and soil disruption, minimal trenching and easily removable conduit and wire design, avoiding wildlife and other critical habitat such as connected wildlife corridors, and decommissioning requirements that also address site-specific land use concerns

CCSA has begun a discussion with relevant land use groups in the state and we plan to put forward joint proposals to the BPU.

7) Provider recommendations on alternative siting and creative land use in sites other than "brownfields, landfills, areas designated in need of redevelopment, in underserved communities, or on commercial rooftops." For instance, are parking lots, road rights-of-way, multifamily buildings, or schools appropriate locations for community solar? Please provide both qualitative and quantitative responses, including what specific policies may be required to facilitate development of these types of projects.

The pilot program needs to allow for siting flexibility. As part of the SREC successor program, the BPU could establish adders, as other states have, to help incentivize development on certain types of sites, such as brownfields and landfills.

As described above, in order to meet New Jersey's needs at the lowest cost to residents, projects in the New Jersey community solar pilot program should be allowed at a variety of different types of locations across the state, including rooftops, brownfields, landfills, and parking lots when it is economically and technically feasible to do so, and also on agricultural land, former agricultural land, forested land, and other open land when it is also both consistent with current New Jersey and federal statutes and regulations, and projects follow a set of mandatory best practices for construction, decommissioning, and complementary use.

At minimum, an "additional allowed lands" category should be added to the land use categories referenced in this question and described above.

In addition to these best practice requirements to regulate development, we also recommend that New Jersey consider, as part of the development of the SREC successor program, establishing positive compensation adders for siting on rooftops (including schools, commercial, and multi-family buildings), brownfields, landfills, and parking lots to proactively encourage a diversity of project siting by recognizing that some forms of siting inherently involve more risk and expense given their often limited and challenging physical limitations, history, and interconnection constraints, but are in the public good and thus should be encouraged. Massachusetts, for example, has compensation adders for projects that are sited on brownfields, landfills, parking lots, and rooftops, and also for floating projects and dual use agricultural projects.[14] New York has recently adopted its first adder system focused on brownfields, landfills, and parking lots.[15] The adders range from $0.02-0.06/kWh/year and $0.10-.30/Wdc respectively.

8) What liability provisions, and exemptions should apply to community solar developers and subscribers for projects located on landfills and/or contaminated land?

[14] Final MA SMART program regulations, MA DOER, September 2017, https://www.mass.gov/files/documents/2017/10/16/225cmr20.pdf

[15] New NY MW Block Design, NYSERDA, June 2018, https://www.nyserda.ny.gov/All-Programs/Programs/NY-Sun/Contractors/-/media/EA9ED9525B744FFCB3D59AE83FFF85A2.ashx

Comfort letters for brownfield and landfill sites and amendments to N.J.A.C. 7:26E-3.12 and 4.7 (Technical Requirements for Site Remediation) would facilitate development on landfills and contaminated lands.

In addition to the above best practice requirements to regulate development and adders to encourage siting on location types with more risk and expense such as rooftops, parking lots, brownfields, and landfills, there are also policy improvements regarding liability and other risk factors, that would encourage more development on these locations. First, concerning landfills and brownfields, the State should, through the NJDEP, have in place a clear, definable path for developers to gain comfort letters at brownfield sites for which full closure has yet to be gained through the NJDEP Site Remediation Program (SRP). This proposal is well warranted for sites which have already begun the process and where solar is expected to be part of any final closure.

The State, through the Solar Act (L. 2012, c. 24) under Subsection t, already directs developers towards brownfields and landfills, but it is not clear as to how developers can help facilitate the closure of open brownfield sites and landfills without taking on the level of liability for which investors often refuse to finance. Having comfort letters ahead of No Further Action (NFA) letters indicating that the State will hold harmless the developer with respect to future liability concerns based on previous contamination will help facilitate financing that will be needed to develop underutilized land for solar.

The State could also look to amend the Technical Requirements for Site Remediation (Technical Requirements), N.J.A.C. 7:26E-3.12 and 4.7) and more specifically the Historic Fill Material Technical Guidance to allow for solar to be sited on sites that are assumed to be underlain by historic fill without the need for drawn out investigation and remedial action by simply utilizing the site design itself as the engineering and institutional controls required as part of the remedial action pursuant to N.J.A.C. 7:26E-5.4 and to N.J.A.C. 7:26C7 and placing a deed restriction on the property.

Low and Moderate-Income Access

Summary: CCSA supports 15% of program capacity being dedicated (or carved out) to projects that meet the definition of a LMI Community Solar Project.

9) Provide recommendations on the definition of LMI community solar pilot projects, with appropriate justification.

CCSA recommends that the BPU reserve 15% of the program capacity for Low and Moderate Income (LMI) Community Solar Projects. Allocating this capacity across the utility service territories in the same way as the broader pilot program is an appropriate way to distribute projects across the state during the pilot program. To allow for orderly project development and

avoid artificially constraining development of a much-needed type of project, this capacity should be available in its entirety when the program opens.

Utility	Utility Load (MW)	% of Load	Size of Pilot (MWac)	Reserved for LMI Projects (MWac)
Atlantic City Electric	2,346	12%	52	8
Jersey Central Power & Light	6,440	32%	144	22
Public Service Enterprise Group	10,878	54%	243	36
Rockland Electric	486	2%	11	2

LMI Community Solar Projects should be defined in rules as a project that serves by capacity at least 20% Low-income residential subscribers, at maximum 80% affordable housing facilities or low-income service organizations, and at maximum 40% any other subscriber.

10) Provide recommendations on what LMI eligibility criteria should be accepted to qualify a subscriber and/or projects as LMI. Include consideration of how many times or how often subscribers should be required to submit proof of eligibility.

Low-Income Subscriber would be defined as an in-state retail end user whose income does not exceed 80% of the area median income (AMI) defined by the U.S. Department of Housing and Urban Development, adjusted for family size or a customer who is enrolled in Federal or state income qualified programs with an equivalent income requirement. BPU may also allow for qualification for households whose income is at or below 200% of the federal poverty level, to ensure households participating in New Jersey's Low-Income Home Energy Assistance Program qualify for the program. CCSA recommends that BPU develop a list of service providers and services or programs that are pre-approved for verification purposes[16] , with an approval process for additional service providers or programs to apply to receive pre-approval. This process has enabled innovative partnerships and existing services to reduce subscriber acquisition costs for LMI customers in community solar programs in other states.

Affordable Housing Facility would be defined as a facility that provides housing services through programs developed by Department of Housing and Urban Development and U.S. Department of Agriculture and Rural Development including but not limited to LIHTC, Section 8, HOME, Public Housing, USDA Programs. The BPU would develop a list of programs that are pre-approved for verification purposes.

[16] As has been implemented in Colorado and other states See: https://www.xcelenergy.com/staticfiles/xe/Marketing/Files/co-sr-community-Low-Income-Verification-Form.pdf

Low-Income Service Organization would be defined as an organization that provides service or assistance to low-income individuals. Additionally, BPU could consider allowing other entities to apply to qualify as a "low-income service organization" if they can demonstrate a clear avenue for passing benefits to low-income customers.

Verification should take place at the time the subscriber is first enrolled in a LMI Community Solar Project. A residential subscriber should be able to continue to be considered an eligible participant as long as their subscription does not change; neither LMI individuals nor project developers should be penalized or disqualified simply because of an improvement in a customer's income level over the course of their subscription. An eligible housing authority or low-income service organization should be considered an eligible participant so long as there is no substantial change to their mission.

BPU should not limit consideration of eligibility to just income levels. BPU should also work with NJDEP to reinstate the Cumulative Impacts Tool or a similar tool to identify environmental justice communities that will benefit the most from community solar. Equipped with this information, BPU could incentivize projects that benefit these communities.

11) The BPU is considering a number of different approaches to encourage development of LMI community solar pilot projects, including, but not limited to:

1. Dedicated capacity: e.g. a certain percentage of overall capacity for the pilot program would be reserved for LMI projects.

CCSA agrees this is an efficient way to encourage development of LMI community solar projects. As detailed above, LMI Community Solar Projects would be defined in rules as a project that serves by capacity at least 20% Low-income residential subscribers, at maximum 80% affordable housing facilities or low-income service organizations, at maximum 40% any other subscriber.

2. Procedural: e.g. LMI projects would receive preference in the solar interconnection queue.

CCSA supports allowing LMI Community Solar Projects to receive discounted interconnection study fees. However, CCSA is very concerned about an approach which creates preferences in the interconnection process.

CCSA strongly recommends keeping interconnection policies separate from considerations of specific subscriber arrangements. Interconnection is a complex, high cost, and highly technical process that applies to all distributed generation projects, and it is difficult enough to implement effective queue management procedures without introducing the complexity of subscriber considerations. We believe there are much more effective ways to support LMI community solar projects, without complicating the interconnection process for the distribution companies or the many distributed generation projects in the interconnection queues.

The relationship between the interconnection queue and the community solar program must be a close and well-integrated and in CCSA's experience, it is essential that interconnection queue management is effective and transparent. Because LMI projects typically take longer to develop, providing preference to these projects in the interconnection queue could essentially backlog the queue in general and make managing the interconnection queue difficult. And, in the event that an LMI project does not reach completion, or it switches from LMI to non-LMI at some point in the development process, providing preference or holding a place for a LMI project that might not be built weakens the overall pilot.

This approach has been attempted in other jurisdictions, notably New York; the experiment yielded zero projects. CCSA believes that the potential program-wide issues that providing interconnection preference for LMI Community Solar Projects would create are not justified by any potential benefits.

3. Financial: e.g. incentives would be provided to LMI community solar pilot projects, potentially as an adder to the bill credit.

There are a number of barriers that make it more difficult for community solar programs to reach low-income customers, and supplemental policy mechanisms are generally required to achieve equitable opportunities for Low-Income Customers to participate.

Financing is currently the most significant barrier to inclusion of low-income customers: Low-income customers face financial barriers to program participation, and third party-owned projects are typically required to identify subscribers with good credit in order to access financing at a reasonable cost. For this reason, policy mechanisms that make low-income subscriptions financeable and affordable – such as a loan loss reserve, having a public agency act as the counterparty for subscription agreements and reducing subscription costs through incentives – are the most important. It is also possible that the utility could take on the role of collections, derisking the subscriptions of these customers which are otherwise often viewed conservatively by financiers as zero-dollar sources of project revenue.

Incentive resources are likely available through several current and pending sources of funding in the state. These sources include:

- the BPU Clean Energy Program where funds could be reallocated from funds currently reserved for low-income funding;
- BPU RGGI funding: the Economic Development Authority gets 60% of RGGI funding which it may use for incentives or a green bank; and
- The SREC successor program could also provide for differentiated incentives for low income projects.

Other mechanisms such as program goals, and education and outreach can also promote program accessibility for low-income customers. For more examples and guidance, see 1. Low-Income Solar Policy Guide developed by GRID Alternatives and Vote Solar, 2. Shared Renewable Energy for Low- to Moderate-Income Consumers: Policy Guidelines and Model Provisions developed by the Interstate Renewable Energy Council, 3. A Directory of State Clean Energy Programs and Policies for Low-Income Residents developed by Clean Energy States Alliance.

Which approach, or combination of approaches, should the BPU implement in order to most effectively support LMI access to community solar pilot projects, in conformance with the Clean Energy Act? Please be specific in recommending qualitative and quantitative incentives, and proposals for implementation.

Best practices in low-income solar programs demonstrate that a combination of targeted programmatic support and incentives, and consumer protection measures will ensure that low-income customers have access to community solar programs from the outset and that markets will develop to support their robust, long-term participation and benefit. Long-term funding to support low-income participation, and ensure that benefits for low-income customers are maximized under the program, is essential.

Value of the Credit

Summary: CCSA recommends a retail rate bill credit. The bill credit is one of the most critical components of a successful community solar program, as its value drives project economic feasibility and is the mechanism by which subscribers see the benefit of their subscription on their utility bills. It is critical that both the value of the bill credit and the standards for the application of bill credits are set thoughtfully and consistently applied across EDC service territories. Given the condensed time frame for the program to be designed, that retail rate credits are used for on-site distributed solar of all scales across the state, and that extensive analysis and regulatory work in the Northeast region has shown that retail rate is a reasonable proxy for the minimum value of solar-generated electricity to the grid and society, we strongly recommend that the bill credit itself be equal to the full retail rate. Given that retail rate designs vary across utility service territories and have design elements that don't lend themselves to a clear credit amount (c/kWh), CCSA will provide the Board with a specific bill credit proposal based on the EDC's default retail rates. Additionally, CCSA outlines specific administrative actions that should be required of EDCs and subscriber organizations.

12) Please define the following terms:

- **Please discuss applicability and impacts on the Pilot Program**

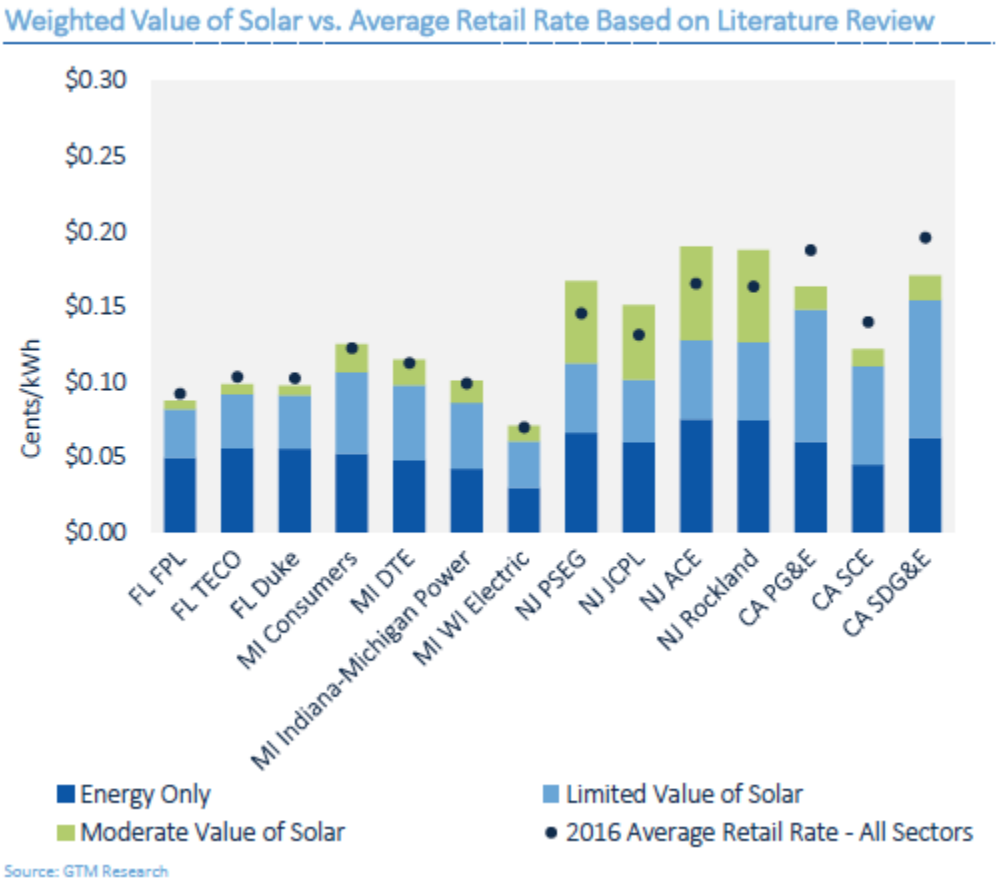
Key to this program's success are adequate compensation for customers and project owners. CCSA proposes a full retail rate credit in conjunction with projects qualifying as Class I REC generators. With this compensation structure in mind, we provide the following definitions below and their implications for a successful program:

- Value of Solar
  - "Value of Solar" is a monetary value placed on solar energy that is placed on the distribution grid. The value can be used as compensation on a kWh basis through a tariff (Value of Solar Rate or VOS Rate). The National Renewable Energy Laboratory notes that "The VOS Rate is determined by: 1) identifying the categories in which solar provides both benefit and cost to the utility and society, 2) calculating values of each of these categories, and 3) combining these components into a single rate." [17] There are two value-based variants on what is still an emerging method for crediting projects: 1) a simple method by which a single value is derived and credited based on a fixed cents-per-kilowatt-hour basis, such as in Minnesota; 2) a time-and-location-variant credit for energy injections into the grid, such as the Value of Distributed Energy Resources tariff being developed in New York.
  - A full value of solar study depends on utility-specific analysis of marginal avoided costs as well as other values for which there may be market-referent values of for which values would otherwise need to be derived (e.g., long-run carbon values and avoided transmission values). While a value-based crediting scheme may be appropriate for the permanent program there simply isn't time in the pilot program to develop a value-based credit. Indeed, leading community-solar markets have followed this path, including Minnesota which transitioned from a retail rate credit to a value-based credit approximately three years after the creation of the community solar program. New York has transitioned solar compensation for community solar and large on-site solar projects from retail rate credits to an interim ("phase 1") value-based tariff, but provides a "market transition credit" that serves as a placeholder for yet-to-be-defined-and-calculated values that brings credits closer to retail rates in initial tranches. Developing value-based credits is an evolving area only implemented in a handful of jurisdictions. Advanced efforts are being conducted as part of a reinvention of how utilities plan and invest in their

[17] National Renewable Energy Lab, Value of Solar: Program Design and Implementation Considerations, p.11. https://www.nrel.gov/docs/fy15osti/62361.pdf

distribution systems. In light of these complexities, a bottom-up, precise value-based credit is not feasible for the initial pilot phase of the community solar program. Instead, BPU should utilize retail rates as a proxy for the value of solar in this initial phase.

- "Retail Rate"
  - Retail rates are designed first and foremost to collect the revenue needed to recover costs within the utilities' ratebase and operating costs. Rates are not designed to reflect the value of solar to the grid. However, meta-analyses of the "value-of-solar" have shown retail rate bill credits to be a fair proxy for value.
  - Analysis of Value-of-Solar studies done both by industry and regulators in the Northeastern United States find that the value of solar exceeds residential retail rates in New Jersey. Below is a table taken from the recent report *The Vision for U.S. Community Solar: A Roadmap to 2030*[18], which is based on limited elements of eight (VOS) studies in the Northeast and Mid Atlantic suggesting that the value is likely understated.



[18] GTM Research, The Vision for U.S. Community Solar: A Roadmap for 2030, https://votesolar.org/policy/policy-guides/shared-renewables-policy/csvisionstudy/#reportdownload

A retail-rate based bill credit should be provided to community solar customers. Since community solar projects will have their value conveyed to numerous customers, potentially on different rate schedules, work is needed to translate the various utilities' rate schedules into a simple bill credit that properly compensates customers for the benefits these projects provide, including avoided generation, transmission, and distribution cost. CCSA plans to follow up with analysis on how to translate these rate schedules into a bill credit which will support project financing, enable consumer savings, and be administratively manageable.

- "Avoided cost of wholesale power"
  - Statute defines the avoided cost of wholesale power as the average locational marginal price of energy in the applicable utility's transmission zone. N.J.A.C 14:8-4.2. By deploying new capacity on the distribution grid, not only are energy and generation capacity avoided but needs for distribution and transmission capacity are reduced as well. A wholesale credit would therefore be inappropriate for compensating customers as well as insufficient to make projects viable.

13) The BPU is currently working to determine an appropriate value of the credit on each participating subscriber's bill. The BPU request that stakeholders provide indicative financial data and analysis in response to the scenarios described below. Please ensure responses include quantitative and qualitative assessments for alternative variations to these scenarios that you believe to be relevant and representative of the New Jersey market (e.g. variations on project size, location, type of off takers etc.)

As a practical matter it is difficult, if not impossible, for a trade association to provide proprietary cost figures to the Board. However, in our response to Question 38 we use publicly available figures to suggest modifications to the cost variables in the model being developed by Rutgers model.

CCSA believes it is not prudent to develop a bill credit value (or values) based on a cost model. From a resource planning perspective, distributed energy resources should be compensated for their full *value* rather than their assumed *costs* plus a margin based on an issued internal rate of return. In addition, there is wide variation in costs for different types of projects; it is not possible to capture all possible cost structures in a single financial model. As the Rutgers presentation at the July 24th Stakeholder meeting showed there is wide variation within project types; this reflects the site-specific costs of deploying projects. We appreciate that the Rutgers model is being built to examine the viability of different compensation models on a scenario basis rather than generate a cents/kWh value.

A cost-based approach to developing a bill credit is likely to yield sub-optimal outcomes, particularly in a pilot phase when the market is nascent and the state is seeking experimentation. In addition to the inability to derive "a number" based on project costs that will broadly support project economics, credit values designed to barely support modeled project economics will limit the types of community solar projects that can be built and community solar product offerings with developers limited to building the lowest-cost project types, seeking out lower-risk (higher FICO score) customers, and offering lower savings to customers.

One extremely important element of project financeability is the tariff term. Distributed solar systems last for 35+ years at high performance. CCSA therefore recommends that community solar customers be compensated at the BPU-determined program credit rate for the operational lifetime of the project, or a minimum of 30 years. As a general rule, shorter tariff terms necessitate higher credit rates in order to generate adequate return projections to support project financing.

14) How should the community bill credit be administered? Should an annualized period mechanism be used for community solar? If yes, should the annualized period be set once per Pilot Project, or once for each individual community solar subscriber?

The EDCs should administer bill credits to customers to simplify and enhance the customer experience. The EDCs should apply bill credits to the accounts of subscribers on a monthly basis based on the proportional output of the community solar facility attributable to that subscriber. The monthly value of the bill credit for the subscriber should be calculated by multiplying the subscriber's portion of the kilowatt-hour electricity production from the community solar facility by the bill credit value. Any 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.

15) Identify best practices in EDC administration of community solar billing in other states and explain how they can and should apply specifically to the New Jersey Pilot Program. EDCs specifically should identify issues relating to changes in the Data Exchange and Protocol Process Flows (or subsequent versions) and how they will administer the billing and crediting process in the Electronic Data Interchange ("EDI") process.

Rules for administering community solar bill credits should be in place for both the EDCs and subscriber organizations. Ensuring consistent, accurate, and timely administration of bill credits is essential to ensuring a good experience for community solar subscribers.

Subscriber organizations should be required to submit to the EDCs in a standardized electronic format, ideally through a secure online portal, a list of subscribers participating in each community solar facility and the percentage of generation from the community solar facility

attributable to each subscriber. Subscriber organizations should be able to update these lists at least monthly to reflect any cancelling subscribers or new subscribers.

Timely application of bills credits by the EDC's to a subscriber bill is essential to a good experience for community solar subscribers. EDC's should apply the bill credits to the subscribers' bills within one billing cycle following the cycle during which the energy was generated by the community solar facility. It allows subscribers to closely track the value they are receiving from their subscription. If any discrepancies were to arise, ensuring credits are applied to the subsequent monthly bill will allow those issues to be addressed in a timely and efficient manner.

In addition to the application of bill credits to a subscriber's bill each month, the EDCs should be required to report to each subscriber organization a report indicating the total value of bill credits generated by each subscriber organizations community solar facility in the prior month as well as the amount of the bill credit applied to each subscriber. This will allow a reconciliation to allow subscriber organizations to ensure the all bill credits have been properly applied.

Clear processes should prevent billing issues from arising. However, the BPU may want to consider establishing a working group between utility and company billing professionals to address any challenges if and as they arise.

16) What should happen to excess credits on a subscriber's bill at the end of a year?

Ideally, the program is designed to minimize excess bill credits for any individual subscriber at the end of a year. In general, subscription should be sized so customers may fully offset their expected usage. In the event that there are excess credits on subscriber account at the end of the year, they should roll over to the next month in perpetuity (unless/until the customer account is closed). (See our response to Q 32 for information regarding maximum subscription size limits.)

17) Are there charges on subscribers' utility bills toward with the community solar bill credit should not be able to be applied?

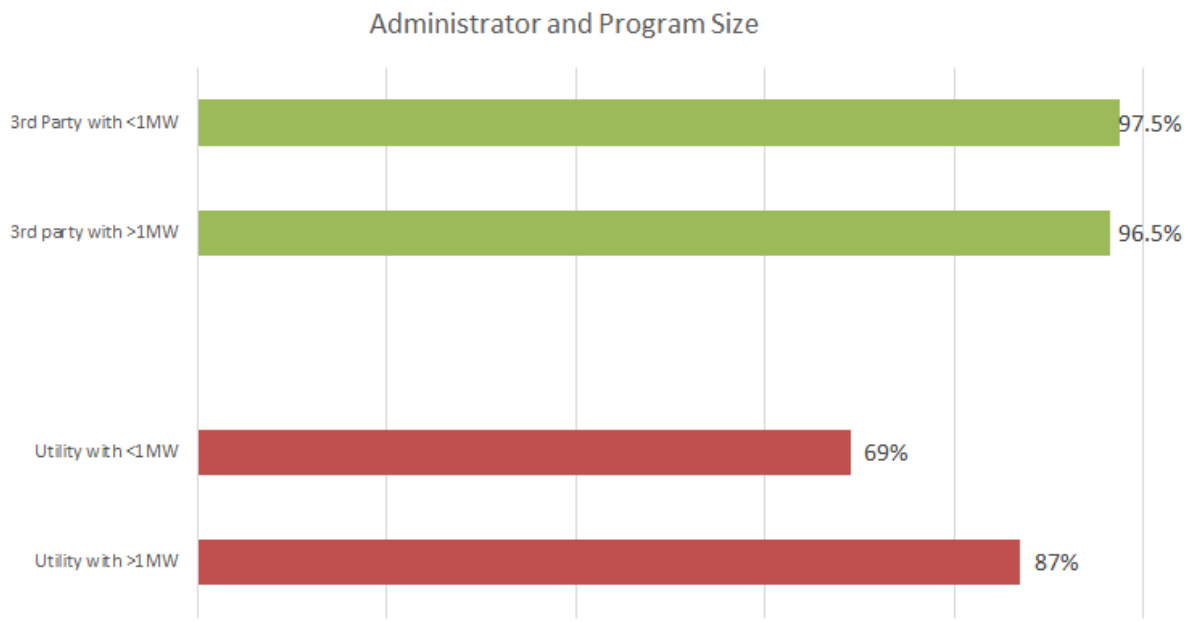
CCSA supports allowing customers to offset 100% of their electricity utility bills.

18) Should unsubscribed energy be purchased by the EDCs at avoided cost or area locational marginal pricing ("LMP")? Or should the community solar pilot project bear the loss of unsubscribed energy?

Subscriber organizations should be allowed to sell unsubscribed energy to the utility at the utility's avoided cost. Additionally, subscriber organizations should have the option to accumulate unallocated credits at the full bill credit value as long as they are then allocated to subscribers within one year. This will allow subscriber organizations price certainty and with the ability to replace subscribers in a timely period. It is important to remember that both of these

are “backstop” approaches. As long as the compensation for unsubscribed energy is lower than the compensation for subscribed energy, subscriber organizations will have a strong financial incentive to keep projects fully subscribed. Experience from existing markets bears this out; results from a survey conducted in 2017 by the Smart Electric Power Alliance and CCSA demonstrates that overall community solar subscription rates are extremely high with projects developed by third-party providers achieving between 96.5% and 97.5% of their capacity subscribed.

SEPA/CCSA 2017 Program Administrator Survey: Percent of Subscribed Energy



Requiring community solar projects to bear the loss of unsubscribed energy, even if that percentage is relatively low, is inappropriate. The interconnecting utility will be receiving the benefit of the unsubscribed energy and should pay at least an avoided cost rate for that energy. Additionally, providing no compensation for unsubscribed energy would increase financing costs, which may make some marginal projects unworkable and ultimately reduce options for potential community solar participants in New Jersey.

19) Should pilot Projects be eligible for solar renewable energy certificates (“SRECs”) If yes, should the SREC be given to the subscriber or to the subscriber organization?

CCSA believes that community solar projects should be eligible for SRECS, but as a practical matter that SREC’s will not be available by the time the pilot program launches. SRECs should go to the solar project and may be assigned to customers at their discretion.

Environmental attributes such as SRECs or Class I RECs should be retained by the subscriber organization so that they may be either distributed to subscribers or monetized to enable greater customer savings.

SRECs and Class I RECs represent environmental attributes of renewable energy generation. Selling these credits for compliance purposes can help lower the cost of subscriptions to community solar customers, thereby making community solar more affordable for a greater number of customers while ensuring that new, incremental renewable energy capacity is deployed. Some customers may want to retain the particular claims from having the RECs/SRECs retired on their behalf, and subscriber organizations would still be able to provide that option as a product offering.

As a matter of policy, community solar projects should be eligible for SRECs. It is clear that the General Assembly envisioned community solar to be incentivized and considered as a similar resources to other behind the meter projects receiving SRECs. C.48:3-87 d. (3) directs the BPU to complete a study evaluating how to modify or replace the SREC program "to encourage the continued efficient and orderly development of solar renewable energy generating sources throughout the state." Specifically, the legislature directs the BPU to "develop megawatt targets for grid connected and ***distribution systems, including residential and small commercial rooftop systems, community solar systems, and large scale behind the meter systems*** as a share of the overall solar energy requirement." Further, the same section of legislation directs BPU to "establish and update market-based maximum incentive payment caps periodically" for the previously mentioned specific types of projects.

While we believe these projects in the pilot program and permanent program are eligible for SRECs and any successor program, we believe, the SREC program will be closed prior to full implementation of the pilot program and therefore unavailable.

According to the latest New Jersey Clean Energy Office Solar Activity Report, as of June 30, 2018, there were 2,583.6 MW of SREC eligible projects installed in New Jersey. Meeting the 5.1% SREC requirement requires approximately 3,188.8 MW.[19] This leaves approximately 605 MW remaining to be installed before reaching the statutory requirement to close the SREC program to new projects. The June 30, 2018 Solar Activity Report also reports a pipeline of SREC applications of 573.7 MW, assuming that 80% of applications successfully install, there would remain only 145 MW of capacity available for new projects that have not yet submitted an SREC application.

Given that community solar projects take 18 to 24 months to develop and interconnect and final rules establishing a program are not expected until at least December, it is reasonable to assume that even the earliest community solar projects in the pilot program would not be installed until the fourth quarter of 2020. If the BPU chooses to close the program based on installations, rather than applications, then we anticipate the SREC program to close in March

[19] Assuming retail sales of 75,359,371 MWhs and a SREC generation rate of 1200 SRECs/MW/year.

2020, making it unlikely many, if any, community solar projects would be installed before the program closes.

NJ Market 5.1 % RPS CAP Analysis
DRAFT 7/25/18

Retail Sales	75,031,955.00
RPS Target	5.1%
MWh Needed	3,826,629.71
MW Program Cap	3,188.86

Case I - 20% Scrub rate	
Current Installed (6/30/18)	2,583.64
Pipeline (6/30/18)	573.77
Scrub (Remaining Pipeline)	(114.75)
Pipeline Installed	459.02
Total Installed	3,042.65
MW Remaining	146.20

Anticipated Community Solar Rules - Active Months for Development	Date	Beginning SREC Balance	Assumed MWs Installed (2017 Average)	SRECs Remaining
	Jul-2018	605.22	29	576.22
	Aug-2018	576.22	29	547.22
	Sep-2018	547.22	29	518.22
	Oct-2018	518.22	29	489.22
	Nov-2018	489.22	29	460.22
	Dec-2018	460.22	29	431.22
1	Jan-2019	431.22	29	402.22
2	Feb-2019	402.22	29	373.22
3	Mar-2019	373.22	29	344.22
4	Apr-2019	344.22	29	315.22
5	May-2019	315.22	29	286.22
6	Jun-2019	286.22	29	257.22
7	Jul-2019	257.22	29	228.22
8	Aug-2019	228.22	29	199.22
9	Sep-2019	199.22	29	170.22
10	Oct-2019	170.22	29	141.22
11	Nov-2019	141.22	29	112.22
12	Dec-2019	112.22	29	83.22
13	Jan-2020	83.22	29	54.22
14	Feb-2020	54.22	29	25.22
15	Mar-2020	25.22	29	(3.78)
16	Apr-2020	(3.78)	29	(32.78)
17	May-2020	(32.78)	29	(61.78)
18	Jun-2020	(61.78)	29	(90.78)
19	Jul-2020	(90.78)	29	(119.78)
20	Aug-2020	(119.78)	29	(148.78)
21	Sep-2020	(148.78)	29	(177.78)
22	Oct-2020	(177.78)	29	(206.78)
23	Nov-2020	(206.78)	29	(235.78)
24	Dec-2020	(235.78)	29	(264.78)

Using the same assumptions outlined above, we estimate that it would be impossible for community solar projects to be able to participate in the SREC market if the BPU were to close the program upon receipt of applications rather than installed capacity. Our analysis, below, suggest that there will be sufficient application to necessitate a program closure in November of 2018.

NJ Market 5.1 % RPS CAP Analysis
DRAFT 7/25/18

Retail Sales	75,031,955.00
RPS Target	5.1%
MWh Needed	3,826,629.71
MW Program Cap	3,188.86

Case I - 20% Scrub rate	
Current Installed (6/30/18)	2,583.64
Pipeline (6/30/18)	573.77
Scrub (Remaining Pipeline)	(114.75)
Pipeline Installed	459.02
Total Installed	3,042.65
MW Remaining	146.20

Month	Beginning SREC Balance	Estimated Approvals Minues 20% Scrub (MW)	SREC Capacity Available
Jul-2018	146.20	32.97	113.24
Aug-2018	113.24	32.97	80.27
Sep-2018	80.27	32.97	47.30
Oct-2018	47.30	32.97	14.33
Nov-2018	14.33	32.97	(18.64)
Dec-2018	(18.64)	32.97	(51.61)
Jan-2018	(51.61)	32.97	(84.58)
Feb-2018	(84.58)	32.97	(117.55)
Mar-2018	(117.55)	32.97	(150.52)
Apr-2018	(150.52)	32.97	(183.48)

CCSA has taken no position on how the BPU should develop regulations to close the SREC program. Regardless of the approach BPU ultimately takes, the effect will be that projects with an 18 to 24 month development cycles, like community solar projects, will not be able to take advantage of the current SREC program. CCSA however, does believe that to ensure a continual and successful pilot, the BPU should establish a process to ensure community solar pilot projects have access to Class 1 RECs in the event that SRECs are unavailable and a full retail rate credit necessary to ensure a stable pilot for a full three years. CCSA will continue to work with the BPU and Legislature to ensure that community solar projects are properly incentivized in the development of an SREC successor program.

20) What components of the Community Solar Energy Pilot Program should be eligible for rate recovery by the EDCs? Include specific reference to what cost should be included to implement and comply with the Pilot Program. What should be the process for determining eligible costs? What should the process be for reviewing eligible cost and the proposed mechanism for recovery?

Uncollected revenue from bill credits, administrated costs, and costs related to billing in the pilot program should be recovered through a nonbypassable charge.

There are some components of the Community Solar Energy Pilot that should be eligible for rate recovery. Because the Community Solar Energy Pilot will be available to all customers, it is appropriate that certain cost be allowed rate recovery. Appropriate costs eligible for rate recover include costs associated with the administration of the program and cost for the development of any billing solutions needed to distribute bill credits.

Additionally, CCSA proposes that lost revenue from bill credits should be recovered by the EDCs. Going forward, New Jersey should work to ensure that the utility capital expenditures are avoided by capturing the benefits of distributed energy resources, including solar, storage, and energy efficiency in utility rate cases; this is a process currently being developed by New Jersey's fellow leading clean energy states. In parallel, current discussions about decoupling could ensure there is no undercollection of EDC revenues. However, for the simplicity of implementing this pilot program without resulting in undercollection of EDC revenues, CCSA suggests the utility have the ability to collect, through a nonbypassable charge, the delta between the community solar bill credit and the EDC's BPU approved avoided cost.

Applications and Interconnection

Summary: The Community Solar Pilot Program should be designed and administered to run in a transparent and efficient manner. CCSA believes each utility should administer a BPU-approved Pilot Program based on the capacity approved by BPU. The program should be designed as a tariff-based first-come, first-served interconnection queue with high project maturity requirements for entry into the program queue.

21) Please provide specific comments on how the Pilot Program application process should be organized, including: 1) what items should be included in the application, and 2) what specific criteria should the BPU use to rank applications.

The "application process" should be managed in conjunction with a community solar pilot program specific interconnection queue at each EDC. A first-come, first-served tariff based process with high project maturity requirements will ensure a level playing field for a diversity of project types.

In developing this process, it is important to set project maturity requirements and require projects to meet ongoing development milestones. These requirements should be balanced to

ensure that only viable, active projects are counted toward available capacity, without requiring an unreasonable level of at-risk investment by developers. CCSA suggest that for acceptance into the interconnection queue projects must have: 1) control of the specific site where the community solar project will be constructed, 2) a completed Level 3 Interconnection Review, and 3) approval of all non-ministerial permits needed to commence construction.[20]

22) What specific measures should be implemented to ensure an effective and streamlined interconnection process for community solar pilot projects?

The above recommendations of using the interconnection process to queue projects notwithstanding, the distributed generation interconnection process should continue to be completely separate from the community solar program administration. This is essential because the interconnection process is a neutral, technical state standard that should continue to function and be improved independently of any individual program, as it needs to function on its own best practices and must treat all forms of solar and other DER equally.

The state should continue to modify and improve its distributed generation interconnection standards to keep up with modern standards, volume and type of deployment project deployment. Outdated standards and processes have caused issues in other states and therefore interconnection processes are an avoidable problem.

To this end, simultaneously to the community solar program development, BPU should work with stakeholders to ensure that New Jersey's distributed generation interconnection standards include the following:

1. First come first serve approach
2. Sequential study
3. Pre-application reports available before hosting capacity is on-line so developers can get basic technical information on substation and feeder capacity without having to enter the queue
4. Maturity requirements to enter the queue
5. Reasonable timelines for both developers and utilities
6. Updated modern technical screens and standards for project study
7. Clear communication of the application of those standards and study outcomes
8. Non 100% payment structure - 25% to show commitment and 75% after a certain period of time

23) What measures can be implemented to minimize negative impacts and maximize grid benefits to the distribution system of an EDC?

[20] Non-ministerial permits are permits in which one or more officials consider(s) various factors and exercise(s) some discretion in deciding whether to issue or deny permits. They are distinct from ministerial permits such as building permits.

CCSA recommends that community solar projects be subject to the same measures that are otherwise in place for similarly sized non-community solar projects. It does not make sense to only consider the impacts of community solar projects on the distribution system in isolation. There are many types of distributed energy resources on the system and the impacts should be considered holistically.

With this in mind, the state is about to embark on a deployment of energy storage pursuant to A3723. As this bill is implemented, community solar projects could be part of an effort to use storage to better integrate solar into the grid.

24) Should existing solar projects be allowed to reclassify as community solar pilot projects?

No. One important component of a Community Solar Program is it stimulates new clean energy development through voluntary customer subscriptions.

25) How can community solar subscription organizations most efficiently submit all required information regarding individual subscriptions to both the BPU and the relevant EDC? In the case of a replacement subscriber in an existing community solar project, should the subscriber organization be allowed to provisionally accept a new subscriber, subject to BPU review and right to disapprove within 30 days? What should that required information be?

This question requires clarification, it seems to imply that the BPU intends to review and approve/disapprove individual subscribers to the program. That is unworkable and unnecessary, particularly given the ultimate scale of the pilot and permanent program.

The Subscriber Organization and EDC should establish electronic exchanges of information, by which subscriber lists are electronically submitted. Ideally, a secure online portal would be developed which allows subscriber organizations the ability to receive confirmation of a successful submission and to see the status of the submissions at any given time. An online process removes the burden of relying on email to submit documents and improve efficiency. A long-term goal would be to create a system that can communicate directly with the utility billing systems.

And, because subscribers are not static, New Jersey should allow at least monthly updates to subscriber allocation lists, although more frequent updates are achievable. Maryland and New York allow for subscriber allocation updates at least on a monthly basis, while Minnesota and Colorado allow updates to be made at any time through an easy-to-use electronic subscription management portal. Commonwealth Edison and Ameren Illinois are currently developing similar subscription management portals to allow providers in Illinois to manage subscriptions and allocations at any time.

26) What reporting requirements should apply to EDCs with respect to the pilot program?

Accurate and up-to-date information regarding the queue and amount of capacity available in the pilot program is essential. Each EDC should post weekly updates to an easily accessible part of their websites regarding the status of the queue and remaining pilot program capacity. The information must include:

- Date updated
- Pilot program size
- Capacity reserved, capacity in-service, and a total capacity allocated
- Capacity remaining

On a monthly or quarterly basis, the EDCs should submit a report with the following information (this is modeled off of the Xcel monthly report[21] in Minnesota):

- Overall queue status
    - Status of Applications, including those that are active, in commercial operation, or withdrawn
    - Of the active applications, additional information regarding the progress, including application phase, study phase, design & construction phase
- Design and Construction status
- Number of projects and total generating capacity (MW) of projects in commercial operation, projects by county, number of subscribers

27) What specific measures, if any, should apply to multi-family buildings?

CCSA has no comments at this time.

28) What specific measures, if any, should apply to master-metered buildings in terms of eligibility for a Pilot Project? Please discuss specifically how to ensure that benefits of a community solar subscription are passed through to tenants.

CCSA recognizes that many customers reside in master metered buildings, and it is important to consider how such customers might participate in community solar and be correctly recognized as residential customers. We would like to work further with BPU to establish how best to categorize and compensate master-metered buildings that wish to participate in community solar, as well as how to ensure savings are passed through to tenants. We also recommend BPU look to New York's experience in addressing these questions.

29) What information regarding community solar pilot projects should be made available on the BPU website? Should website publication be automatic upon approval of the project by the Board, or only upon request from community solar project owners?

[21] See docket 13-867

CCSA suggest that the BPU create a page within the NJCleanEnergy website that would be available, at a subscriber organization's request, to post contact information for community solar projects accepting subscribers.

30) What specific elements should the BPU consider to ensure a smooth transition from the Pilot Program to a full-scale Community Solar Program?

Project developers (and the ecosystem of lenders and financial partners that supports project development) must have adequate certainty on project economics at various stages in the development process in order to proceed with the next step. For example, in order to proceed with the often-significant costs associated with interconnection upgrades, developers need to have high confidence in the revenue their project will ultimately generate. Thus, in order to ensure a smooth transition from the pilot to a permanent community solar program, BPU should carefully consider at what milestones projects can be confident they will qualify for either the pilot or permanent program. While there are many details that will need to be determined as the SREC successor program and the full scale community solar program are designed, it is likely that projects that do not qualify for the pilot program should be queued and made eligible for the permanent program, and that BPU should seek to establish at least rough parameters for the permanent program as early as possible, so that developers can make informed decisions regarding further investment.

Customer Subscriptions, Customer Protection

Summary: CCSA recommends that minimum subscriber levels be three unique customers, that market dynamics should effectively self-limit subscription sizing to approximately match a customers ability to offset the electric portion of their bill, that subscriptions be managed purely by the subscriber organization, and that those subscriptions be transferable and portable within the same utility service territory. Additionally, CCSA believes that customer protection and education is an important element of a successful community solar program and believes that other states, such as Maryland, have examples of simple, yet effective disclosure policies that New Jersey can implement to ensure customers are educated and protected when subscribing to a community solar project.

31) Should there be a minimum number of subscribers per community solar pilot project? If so, what should it be? Please provide specific support for this number.

Yes, CCSA recommends a minimum of three subscribers per community solar project. Setting the minimum number of subscribers at this level will precipitate a variety of different project sizes and compositions. This will can ensure that community solar projects are shared resources as intended rather than simply remote net-metered system.

Additionally, CCSA suggests that limiting a single subscriber to a certain maximum percentage of the project can also be effective. CCSA suggests that in addition to the minimum of three subscribers that no single subscriber's subscription may total more than 50% of the nameplate capacity of an individual community solar project.

32) What should be the maximum subscription size for each subscriber? Should specific limits be placed on residential versus commercial customers?

CCSA recommends that subscriptions be sized to allow a customer to offset 100% of their electric utility bill. Ideally, allowing for subscriptions to be sized to offset up to 120% of their electric bill would allow important flexibility in the event that a customer's electrical usage increases, such as the additional of an electric vehicle. Depending on how subscription terms are defined by the subscriber organization, a capacity subscription may be converted to kWh units to demonstrate compliance.

Please see CCSA's response to Question 38 fora more detailed discussion of the issue of ensuring participation by small customers in the community solar program.

33) What specific measures should be enacted for both community solar subscription organizations and the BPU to manage subscriptions effectively? Please provide specific churn rate assumptions.

Subscriptions should be managed by the Subscriber Organizations. Subscriptions are private contracts between two willing parties in a voluntary program. Once rules for consumer protections are finalized, the management of subscriptions should be left to the subscriber organizations. It's unclear what role the BPU would take in managing the subscription agreements between subscribers and subscriber organizations.

34) Should subscriptions be portable? If yes, under what conditions?

Yes, subscriptions should be portable and transferable. Individual subscribers should be able to take their subscription with them if they move within the same EDC service territory. Subscriptions from one EDC service territory cannot be transferred to another EDC service territory. If a subscriber moves outside of an EDC service territory, their subscription should be transferable to another customer who resides in the same EDC service territory as the community solar facility and meets the requirements of the subscriber organization. The specific terms and conditions that apply to subscription portability and transferability should be provided to the customer in their subscription agreement.

35) Please identify what specific limits, if any should be placed on the transferability of subscriptions, in accordance with applicable statutes, rules, and regulations. If the BPU were to determine that subscriptions are fully transferable, what consumer protections should be established? Please include consideration of, among other things, necessary approvals and certificates, to ensure that if a community solar subscription market, including to third parties, were to develop, that said market is fair and transparent?

CCSA needs more information to fully respond to this question. It's unclear what is meant by "fully transferable" and whether the BPU is asking about the ability of an individual customer or subscriber to transfer their subscription to another individual customer or subscriber or whether the BPU is seeking information about the sale of subscription agreements from one subscriber organization to another subscriber organization.

36) Please provide comments on consumer protection measures, including ideas and language for consumer protection rules, and a proposed customer disclosure form.

Consumer education and engagement is absolutely critical to building a successful community solar market. CCSA member companies have a vested interest in consumer protection. As a condition of membership, each CCSA member company has agreed to adhere to a set of nine Core Principles for developing effective community solar policies and programs.[22,23] Of those nine Core Principles three focus on consumer protection:

- Ensure that community solar projects are operated and maintained well to protect customers and developers' investment.
- Ensure full and accurate disclosure of customer benefits and risk in a standard, comparable manner that presents customers with performance and cost transparency.
- Comply with applicable securities, tac, and consumer protection laws to reduce customer risk and protect the customer.

CCSA supports consumer protection measures that are right-sized to foster a healthy, competitive and reliable market. Particularly given that CCSA is not aware of any major consumer protection problems in other states related to community solar, the most logical approach is one focused on customer education and disclosure.

To assist with education, CCSA in collaboration with SEIA developed the *Residential Consumer Guide to Community Solar.*[24] This guide builds upon SEIA's existing *Residential Consumer Guide to Solar Power* and provides guidelines to help community solar consumers become as informed as possible. It provides a list of key questions that consumers should ask prior to entering a community solar agreement and includes a robust list of additional resources available.

In other markets, consumer disclosure documents have been adopted by utility commissions as part of their community solar programs. Maryland's Community Solar Contract Summary, which is included as part of every community solar agreement (subscription) has emerged as a best

[22] Coalition for Community Solar Access, Core Principles, Accessed July 30, 2018, http://www.communitysolaraccess.org/about-us/ccsa-core-principles/.
[23] Many CCSA members are also members of the Solar Energy Industries Association and adhere to the SEIA Solar Business Code: https://www.seia.org/initiatives/seia-solar-business-code.
[24] Solar Energy Industries Assocition and Coalition for Community Solar Access, Residential Consumer Guide to Community Solar, July 2016, https://www.seia.org/sites/default/files/Residential%20Consumer%20Guide%20to%20Community%20Solar%20-%20FINAL.pdf.

practice to ensure clear and consistent disclosure across the industry. [25] CCSA believes Maryland's robust regulatory process vetted these issues appropriately and supports the adoption of a similar Contract Summary for use in the New Jersey Community Solar Pilot Program.

37) Besides NJ building codes and standards, what specific technical standards should the BPU cite in its rules and regulations for the community solar pilot projects?

CCSA recommends that community solar projects be subject to the same technical standards of other similarly sized solar projects for purposes of interconnection to the distribution grid and local building codes. There is no need for additional technical standards for community solar pilot projects.

38) Please provide general comments on any issues not specifically addressed in the questions above. Please do not reiterate previously made comments, keep these comments succinct, and make specific reference to their applicability in the New Jersey context.

Comments on Rutgers University's New Jersey Community Solar Financing Model
As CCSA understands the work being done by the Edward J. Bloustein School of Planning and Public Policy, the goal is not to establish a bill credit value for community solar, rather to test a range of assumptions to test boundary scenarios to generally understand if revenues available to developers of community solar projects, or lack thereof, could result in a financial shortfall for developers. CCSA supports the use of thoughtful analysis to ensure that community solar can thrive in New Jersey creating good clean energy jobs, help the state meet its climate and clean energy goals, and provide subscribers of community solar projects a fair value for the clean energy their subscriptions place on the the local distribution grid.

CCSA notes that cost assumptions in particular are driven both by program size and program maturity. In particular, the cost of customer acquisition, land, and O&M can be higher in smaller markets. Developers gain experience with each project that must operate under a standard set of program rules, therefore it is important to consider that the first community solar projects may have slightly higher cost, however these cost can come down over time as developers gain experience with the program. Additionally, if the program size is adequate (450 MW or more) community solar companies will make investments specific to the New Jersey program, allowing for specialization around task such as customer acquisition, permitting, and O&M; this could help offset some of the increased cost associated with a new program offering to consumers.

CCSA offers the following to answer specific questions posed by Rutgers and additional comments.

- Slide 5:

[25] Maryland Public Service Commission, Maryland Comunity Solar Contract Summary, https://www.psc.state.md.us/wp-content/uploads/Community-Solar-Contract-Disclosure-Form-and-Instructions_04162018.pdf

    - As noted in CCSA's response to Question 19, CCSA believes the legislature is clear that community solar projects are eligible for SRECs and any successor incentive program implemented by the BPU. However, CCSA's analysis concludes that SRECs will certainly not be available for the full pilot program and will very likely not be available by the time the pilot program launches, therefore CCSA suggest that modeling assume only Class 1 RECs.
    - We note that interconnection costs are not specifically listed as a cost input, but should be included more explicitly. Interconnection costs to the distribution grid can be much more significant for community solar projects as compared to on-site projects serving commercial load and we have seen these costs be on average $0.20-0.25/Wac in neighboring states with similar development and density. These costs are also not eligible for the ITC.
    -
- Slide 8:
    - CCSA agrees that solar canopies have significantly higher installation costs than ground mounted systems. CCSA notes that installation cost are only one item that make solar canopies more expensive; O&M and insurance are also more expensive for these projects. In the example of a solar canopy which might be used to cover parking, consider:
        - Companies not only must add additional cost to cover design details to protect electrical equipment, these systems are vulnerable to both intentional and accidental tampering causing developers to add additional insurance cost.
        - The ongoing maintenance cost are more expensive. These systems must be inspected more often to proactively monitor for any tampering, guttering systems may need to be installed to manage water flows, and snow removal and abatement is essential to protect individuals who may be walking nearby.
        - Additionally, these systems require additional racking and mounting hardware which is increasing in price due to tariffs (see below).
- Slide 9:
    - CCSA agrees that the impacts of the 30% tariff on solar imports will have a material impact on the price of solar panels for the entire community solar pilot program. CCSA also notes that the Trump administration has levied 25% and 10% tariffs on steel and aluminum respectively. The impact of these tariffs on the solar industry is significant as steel and aluminum are key components in the cost of panels, racking, and mounting. GTM Research has estimates that these tariffs could add 2 to 4 cent per watt to the price of racking.[26]
- Slide 10:
    - CCSA agrees that the developer should be able to take advantage of the ITC, however, due to the annual capacity limits that BPU is required to establish,

[26] Pyper, Julia,"Steel and aluminum tariffs could add 2 cents per watt to utility scale solar projects", *Greentech Media*, March 1, 2018, https://www.greentechmedia.com/articles/read/steel-aluminum-tariffs-could-add-2-cents-per-watt-to-utility-scale-solar#gs.2t5_kKI

community solar projects will be able to take advantage of varying ITC rates. CCSA believes that depending on a number of variables including the date that the rules for community solar projects are finalized will determine the ITC rate for each project. It is important to understand that community solar projects have a 18-24 month development timeline. Therefore CCSA suggest that Rutgers consider capacity secured for purpose of the program in 2019, would begin construction in 2020; projects that secure capacity in the program in 2020, would begin construction in 2021; and projects that secure capacity in the program in 2021, would begin construction in 2022.

- Slide 11:
  - It is widely recognized that projects serving higher proportions of residential customers incur higher cost associated with customer acquisition and management.
  - CCSA recommends that Rutgers review analysis by Sustainable Energy Advantage in consultancy for the Rhode Island Office of Energy Resources on one time and ongoing customer acquisition cost assumptions for community solar.[27] SEA surveyed the industry to ascertain customer acquisition cost associated with projects that serve at least 50% of their capacity to subscriptions of 25 kW or less. They found that the upfront (one time) customer acquisition cost associated with these projects are about $0.25/W, the ongoing (annual) cost associated with customer replacement is $0.02/W/year, and the ongoing (annual) cost of customer management and billing is about $0.01/W/year.[28]
- Slide 14:
  - CCSA is not aware of a statewide property tax abatement for community solar projects. P.L. 2008, C.90 does exempt some Renewable Energy Systems from real property taxation, however, the definition included in the statute likely would not apply to community solar systems. The statute states:

    > *"Renewable energy system" means any equipment that is part of, or added to , a residential, commercial, industrial, or mixed use building as an accessory use, and that produces renewable energy onsite to provide all or a portion of the electrical, heating, cooling, or general energy needs of* ***that building****.*

    Because community solar facilities place there energy on the distribution grid, they are not providing for on-site energy needs. CCSA does not believes tax abatements would apply to community solar facilities without specific direction from either the BPU or the New Jersey Department of Taxation and suggest absent clarification that any analysis assume community solar projects would be taxed as if they were independently owned facilities that supply energy to the electrical grid.

Small Customer Participation

[27] Sustainable Energy Advantage, LLC et. al, Rhode Island Renewable Energy Growth Program, September 2016, http://sos.ri.gov/documents/publicinfo/omdocs/minutes/6154/2016/49211.pdf

[28] All Rhode Island cost references for capacity are direct current (DC).

C.48:3-87.11 b. (8) directs the Board to establish "standards to ensure the ability of residential and commercial customers to participate in solar energy projects, including residential customers in multifamily housing." CCSA believes it is essential that community solar programs provide opportunities for all customers classes to participate. To meet this statutory directive, it is essential that the overall program is designed to ensure small customers (residential and small commercial subscriptions under 25 kW) participate in the program.

Developers incur higher customer acquisition costs when serving high proportions of small customers. Without providing special considerations for this customer segment, other states have proven that the developers will likely gravitate to larger customers which can be subscribed and managed at a lower cost.[29] It is imperative that small customers be able to participate in community solar, as they represent approximately 50% of New Jersey's energy load. Moreover, because utilities will be able to recover many costs associated with implementing a community solar program, it is important that one segment of the market is not overly represented among community solar subscribers.

There are four general program design approaches to ensure small customers have the ability to participate in community solar programs. Some approaches impose a requirement for projects to serve small customers, while others use financial incentives to encourage subscriber organizations to serve small customers.

- Requirements:
    - Per-Project Requirement: The Per-Project Requirement approach works by requiring every community solar project to serve a certain percentage of small customers. This approach uses a firm requirement at the project level to ensure small customer participation.
    - Program Categorization: The Program Categorization approach would carve out a portion of the program for projects that are required to serve a high proportion of small customers. As noted in CCSA's response to Question 3, we do not support efforts that divide the program further than by EDC and a special category for LMI Community Solar Projects.
- Incentives:
    - Rate Differential: Under this approach, customers of different customer classes receive different bill credits for participation in projects, with residential and small commercial customers receiving higher bill credit values. The rate differential must be large enough to provide the developer an adequate incentive to serve small customers.
    - Project-Level Incentive: This approach provides a greater monetary incentive to projects that allocate a certain percentage of capacity to small subscribers.

States have taken a variety of approaches to this question, some of which are summarized below:

[29] This has been the case in both the Minnesota and Colorado Community Solar Programs. These programs serve only 10% and approximately 14% residential customers, respectively.

- Massachusetts: Community Solar facilities are defined as having at least three participants; no more than 2 participants can receive credits from more than 25 kW of capacity; Combined share of those subscriptions can not exceed 50% of the total capacity. Projects meeting this definition receive higher incentive values to incentivize small customer participation. Remote net metering is also available for all types of customers but does not receive the added incentive.
- Illinois provides varying REC levels to incentivize projects, with differing levels of small customer participation (25%-50%, 50%-75%, 75%-100%).
- Rhode Island: No more than 50% of credits may be allocated to an eligible recipient; at least 50% of the credits are allocated to recipients with shares of 25 kW or less.
- New York: For shared "Community Distributed Generation" facilities, no more than 40% of facilities output may go to subscribers with shares sized greater than 25 kW; At least 60% of facility's output must got to subscribers with shares sized 25 kW or less. As a function of the current Value of Distributed Energy Resources tariff, residential and small commercial customers receive more valuable bill credits. Remote net metering is also available for non-residential customers, with only one participant per project.
- Oregon: 50% of the nameplate capacity of every project must be reserved by project managers for subscriptions or ownership by small commercial and residential participants. This program is not yet operational.
- Minnesota: A single subscription cannot exceed 40% of the facility's output. Residential and small commercial customers receive more valuable bill credits.
- Hawaii: Requires at last 40% of project to be subscriptions of 50 kW or less.

As part of CCSA's retail rate analysis, we will provide proposals on how best to manage small customer participation in the context of New Jersey's community solar pilot program. It is important to support a diverse set of community solar projects while yielding a representative set of customers participating in projects.

Appendix : Maryland Consumer Disclosure Form

Header Optional: Company logo and other contact info (website, email address, etc.), address of CSEGS

Maryland Community Solar Contract Summary		
Customer Name **[Optional Customer Info]** **Utility Service Territory**		Reference Page or Section
Effective Date of Agreement	[Date] or [This Agreement is effective once signed by both parties]	
Term	[Description of term in months or years] [Description of renewal or extension terms, if applicable]	
[Estimated date bill credits will appear on your utility bill] **OR** **[Estimated date CSEGS will begin producing credits]**	[Month/Year] [Additional explanation or description of timing if estimated month/year is unknown]	
Subscription Type **(Select one from right column)**	[Fixed kilowatt-hours per year - XX kWh/year] [Fixed kilowatt size – XX kW] [XX% of CSEGS nameplate capacity and statement regarding total nameplate capacity of CSEGS] [Fixed percentage of subscriber usage – XXX% of historical annual baseline usage] [Variable percentage of subscriber usage – up to X% of historical annual baseline usage or from X% to Y% of historical annual baseline usage] [Other (describe)]	
Subscription Price **and** **Escalator, if applicable**	[Description of pricing based on subscription type] [X% per year or other applicable period]	
Annual or Monthly Fees	[Description and amount of annual or monthly fee, if applicable]	
Early Termination or Cancellation Fees and Terms	[Description and amount of early termination or cancellation fees, if applicable]	
Other Fees	[Description of any other applicable fees not identified above. This section should also include a statement about whether such fees are refundable. See additional information on SO instruction form]	
Other Important Terms	[Description of other important terms]	

Full Contract Terms: Review the full terms and conditions of the subscription contract. This summary does not include all relevant terms of the subscription contract.

Subscriber Initials: _____Date_____

Maryland Community Solar Contract Summary Disclosure: Instructions to Subscriber Organizations

1. The color, font type, and size of the font used to complete the Disclosure form may be modified so long as the font is no smaller than 10 point.
2. Content in the left column must be presented in the order provided in the approved Disclosure form (customer name, effective date, term, estimated date for bill credits, subscription type, subscription price and escalator, annual or monthly fees, early termination or other cancellation fees, other fees, and other important terms).
3. The right column should reference the page and section number(s) of the contract corresponding to each disclosure and must be completed.
4. The customer's name must be typed or legibly printed.
5. If it is possible for the term of the contract to commence more than 30 days after the subscription contract's effective date, then the subscriber organization must send the customer a supplemental notice within 14 days of the date the term actually commences.
6. If applicable, the renewal clause must be disclosed under the term section.
7. The list of subscription types is non-exhaustive. If "other" is used it must be fully described.
8. Any early termination or cancellation fees MUST be separately disclosed and may not be included in the annual or monthly fees or "other fees" section of the Disclosure.
9. Description of "Other Fees" should include a list and description of any applicable fee other than the subscription price and early termination/cancellation fees, including but not limited to: security deposit, application fee, subscription reduction fee, and subscription transfer fee. This section should also include a statement about whether such fees are refundable or non-refundable.
10. If an agent is involved in the sale, either via telephone or in-person, the agent or agents name(s) must be legibly written in the bottom left corner. If an agent is not present at the time the contract is executed (such as in a sale completed via direct mail or online) this line may be omitted or completed with "Not applicable."
11. If the subscriber organization has presented estimated cost savings to the customer, the Disclosure form must state the customer's actual or assumed current electricity rate in cents or dollars/kWh and any projected savings presented to a potential subscriber shall include a comparison that projects future electricity rates increasing at not more than 1 percent per year.
12. If the customer's subscription is based on more than 100% of customer's historical annual baseline usage or is reasonably likely to result in the customer receiving credits exceeding 100% of their actual annual usage during the first year of the subscription, then the following information must be disclosed under "Other Important Information":

[Estimated or Actual] amount of subscribed output	_____ kWh/year
Subscriber's [Estimated or Actual] baseline annual usage	_____ kWh/year
Estimate of subscribed output divided by subscriber's baseline annual usage	_____% Bill credits are only paid at full retail rate for up to 100% of your actual annual usage. Additional credits will only be applied once per year at a lower "excess generation" rate. In no event may a customer subscribe to more than 200% of their baseline usage.