



The Coalition for Community Solar Access (CCSA) is a national Coalition of businesses and non-profits working to expand customer choice and access to solar energy for all American households and businesses through community solar. CCSA's 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, win, win for all, starting with the customer. Our members are actively engaged in New Jersey's Community Solar Market and we appreciate the opportunity to comment on New Jersey's successor solar program.

**Introduction:**

**Community Solar can and should play a significant role in the solar build out in New Jersey.**

Ever since New Jersey's solar market started in the early 2000s, the market has been plagued by a design flaw that has prevented most ratepayers in New Jersey from direct access to solar energy and its many benefits. Only those residents fortunate enough to own a home and have a roof that faced the right way and was large enough and in good enough condition to accommodate the weight of the solar panels, could enjoy the economic benefits of solar. Until the advent of community solar, customers also had to have a strong credit score to get a loan or a Power Purchase Agreement (PPA). Community solar is the vehicle to provide access to the 75% of American households and businesses by removing the common obstacles of financing, roof feasibility, and home or building ownership; ensuring all New Jersey ratepayers can participate directly in the renewable energy economy and individually contribute to the goals of the state's Energy Master Plan.

For many reasons, solar has not been an option for people living in urban areas or in high density housing. This persistent inequality in solar access is long overdue for a brighter way forward. The Clean Energy Act of 2018 provided a path to a permanent community solar program following a pilot program. Importantly, the Act provides low- and moderate-income residents of New Jersey an opportunity to participate in achieving New Jersey's clean energy goals. Community solar must be a significant part of New Jersey's immediate energy future so that we can rebalance an inequitable status quo toward equal access and environmental justice.

The State's Energy Master Plan (EMP) sets ambitious goals for New Jersey's energy future. The goal of 17 gigawatts of solar by 2035, and simple math suggests New Jersey will need to add at least a gigawatt of solar in the next several years to move toward this goal. Community Solar



(CS) should be a significant element of this growth as it brings scale, value, and savings to New Jersey residents who have historically been excluded from the benefits of solar.

**Community Solar should receive a fair, and appropriate, fixed payment:**

Given the unique value of Community Solar, CS projects should be among the category of projects eligible to receive a long term fixed payment for RECs. This is not a determination based on size in a bifurcated market design, which CCSA generally supports. Rather, the fixed payment is reflective of the types of projects favored by the State.

A fair and appropriate fixed payment, along with a significant capacity target and clear, measurable eligibility requirements that continue for more than a single year will bring New Jersey the jobs, cost savings, and economic development that come with being a leader in community solar. The fixed payment will allow community solar projects to be developed expeditiously with lesser risk, which translates into lower rates, and higher benefits, to community solar customers.

The Cadmus Report suggests a dramatic and unexplained reduction in community solar incentives compared to the level of incentives currently available in the Transition program. As discussed in greater detail below, Cadmus notes that projects with cost adders (i.e., carports, community solar) need relatively higher incentives ...”<sup>1</sup> and yet Table 30 of the Cadmus report suggests that rooftop community solar was modeled with an incentive level lower than direct-owned roofs and only half that of third-party owned roofs. This is a sudden and unsupported change.

**Capacity targets for Community Solar:**

Increasing the capacity in the CS Pilot Program will allow the greatest number of New Jersey residents and businesses to participate in the green economy, mitigate the effects of climate change, and allow community solar an equitable chance to be a robust part of New Jersey’s energy mix along with more established solar markets in the state.

**We recommend 300MW for PY2 - which we also recommend should be the final year of the pilot program. Regarding a yearly allocation for the permanent Community Solar program, that capacity should build from the pilot program with the allocation grounded in EMP goals of all ratepayer access, environmental justice and equity and the goals of carbon free generation by 2050. However, the first year of the permanent program should have an**

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<sup>1</sup> Draft Capstone Report, August 11, 2020, p.72



**allocation no less than 500MW and should increase based on the EMP goals. CCSA strongly recommends PY2 qualify for TREC incentives and transition to the SREC Successor incentive with the alignment of the permanent program.**

CCSA recognizes there might be regulatory process requirements that may prevent the alignment of the two programs. In this event, we would recommend increasing the capacity for PY2 to a minimum of 300MW and PY3 should receive a least 400MW. The permanent program should continue to be grounded in the EMP goals for ratepayer access, as previously recommended, and should start no lower than a first year allotment of 500MW. In addition, if the permanent program and the successor program cannot be aligned by the launch of the successor program, the Board will need to ensure flexibility in the design of the successor solar program in order to incorporate lessons learned from the solar pilot program and when the rules are established in 2021. The Board's ability to adjust the successor program, as appropriate, to reflect the new community solar program rules will be crucial.

**Syncing the Permanent CS program with the solar successor program:**

The response to the first year of the pilot program was robust. More than five times the 75 MW cap showed up in the application process. Given unmet demand, the EMP goals, the persistent flaws in the current solar program that disenfranchise most residents in New Jersey and continue historic inequality, **CCSA highly recommends syncing the permanent community solar program with the implementation of the SREC Successor Program** to create market certainty and allow the community solar permanent program to fully participate in newly established solar market as a permanent fixture. In particular, the rulemakings for the successor program and permanent community solar program should align. This alignment streamlines the work of staff and stakeholders, gets the State on track to meet our emissions and renewable energy goals, and creates opportunity to serve all ratepayers in the most fair and equitable manner.

The State has not yet begun accepting applications for the second year of the pilot program. While we believe that learning from the pilot program projects can and will inform the permanent community solar program, New Jersey can and should take advantage of lessons learned in other state community solar programs. This is an efficient use of staff's time, which is a limited resource given everything the BPU is undertaking to stimulate New Jersey's green energy economy. Alignment just makes good sense.

**Priority features of the Solar Successor Program:**



Equality of access to solar should be a priority of the permanent solar successor program. This is best delivered through community solar subscriptions, creating clean energy opportunities for residents who may otherwise face barriers to access. Further, maintaining systems over 20 to 30 years will be necessary to ensure the investment made by New Jersey is sound and is providing the value needed: emission-free electricity generated by the sun. Regarding ratepayer cost considerations, it is understood that *scale delivers lower costs*.

**For these three reasons, among others, community solar can and should play a significant role in how New Jersey’s solar generation is built out over the next decade. Equality of access and environmental justice regions will be served by aligning the Successor Program with community solar.**

**Comments:**

The following section provides comments to several of the specific features of the solar successor program that were discussed at the stakeholder meeting on August 20, 2020 and posed as questions in the notice to stakeholders dated August 4, 2020.

Incentive structure design:

As recommended by the Board’s consultant, CCSA agrees with a bifurcated market design that would have both a fixed incentive and a competitive program. The competitive solicitation process should be reserved for large utility-scale projects participating in the wholesale electric market, and this should not include community solar. Separately, projects that qualify for the community solar program should receive a long term fixed incentive. Since community solar projects are unique and do not have equivalent value and cost structures with large scale projects that sell directly into the grid, it is appropriate for community solar projects to receive a fixed incentive. This structure will allow for price discovery and market certainty for different solar market segments. As previously stated, fixed incentives provide the market certainty needed to establish this new solar market, providing access to solar for all while giving the BPU the flexibility to make adjustments in response to energy market changes and New Jersey’s customer base.

**For project types that receive long term fixed incentives, CCSA recommends an adjustable block program supported by periodic evaluation by the BPU and adjusted biennially to protect ratepayers, provide a reasonable balance between consistency, and provide the opportunity to adjust for market conditions;**



A longer-term fixed incentive helps bring increased savings to customers through the creation of a cost-effective market. A longer term fixed payment will also help the Board manage the total program costs against the cost cap. For community solar projects, CCSA recommends a term of 15 years or longer with a fixed incentive for the full length of the applicable term.

Value versus cost:

The term “incentive” usually denotes additional costs. Costs and value need to be distinguished from each other. Both cost and value may be part of an incentive and this needs further discussion and clarification in order to be properly reflected in program design. Also, any discussion of qualification life must discuss which elements could be time-limited.. To illustrate with an example, as long as solar is generating, it is providing value through carbon-free generation. This value should not be subject to an artificial cap based on time.

In the early 2000s, the concept of a solar renewable energy credit (SREC) tied to generation was first discussed with the idea that the SREC would capture and reflect value that the markets did not yet recognize . As the State migrated its market design to reliance on the SREC in 2006, the SREC was thought of and discussed as an “incentive.” The implication was that the SREC was not delivering *additional value to* ratepayers; it was *an additional cost on* ratepayers – a crucial difference.

It is well accepted that solar provides multiple benefits or values to end users, to the electric distribution system, to the regional transmission system, and to society, as the following examples illustrate:

- Merit Order Impact and Peak Shaving: Solar energy is injected into the grid at a fuel cost of zero. This benefits all ratepayers by putting downward pressure on the clearing price in the wholesale markets for electricity, as higher cost generation is removed from the dispatch supply stack. This impact has been recognized by the BPU in its review of energy efficiency programs.
- Emission-free: Solar generation is emissions-free. New Jersey has suffered from poor air quality and this is an emissions-free generation source for the 20-30+ year lifetime of the project. It is also carbon-free, making long-term contributions to fighting climate change.



- Economic multiplier effect: Solar is locally produced, creating jobs and economic benefits to the State and municipalities. As an example, New Jersey will see an increase in community solar employment, including thousands of sustained full-time jobs, paying an average wage of \$33/ hour, if only 1.5GW of Community Solar was built. The economic multiplier effect is a fact also recognized by the BPU in its review of energy efficiency and offshore wind energy projects. We recommend that the Board apply similar recognition of solar’s economic benefits in the development of the SREC successor program.
- Distribution Grid Benefits. Solar also provides benefits to the grid, although quantifying how solar may defer distribution upgrades and/or provide locational grid benefits will be the subject of ongoing investigation and discussion with utilities as distributed energy resources (DERs) continue to play a larger role in generation. It is notable that in the NY REV proceedings, *distribution value* was recognized and given a placeholder as a “market transition credit,” in the value stack for large scale solar with ongoing work to help more specifically quantify its value.
- Environmental Justice. Community solar projects bring clean economic development and energy savings to local communities who have been traditionally left out of the green economy and have experienced health and economic repercussions from fossil fuel generation. Through intentional collaboration with community-based organizations, community solar can support equal access to clean energy and facilitate equitable participation in program design.
- Low and Moderate Income Communities. Due to common barriers to accessing clean energy, such as home and building ownership and financial barriers, New Jersey residents have been unable to participate in the green economy. Community solar provides access to clean, affordable energy, needed cost savings, and has the potential to relieve energy burdens for many of the state’s most deserving residents, both urban and rural. Local community solar can provide access to job training and opportunities, increased tax dollars paid for by developers, and necessary grid upgrades to geographies that have been neglected.

As New Jersey contemplates the market structure for the solar successor program and the permanent community solar program, it will be crucial to distinguish cost versus value. New Jersey will benefit from a cost-effective market that places incentive levels (costs) lower than



the fully recognized value of solar energy. This should be the subject of a workshop meeting this fall.

Interconnection costs:

As DERs proliferate on the distribution grid, the expectation is that it will become more costly to interconnect those systems as circuit limitations are reached. The market has already experienced this, especially in the southern part of New Jersey where certain circuits remain closed to development without significant and costly upgrades to the grid in those locations.

In some cases, battery storage and other technologies may be deployed to defer or avoid grid updates: solutions referred to as non-wire alternatives. In other cases, the grid will require additional reinforcement by the utility to accommodate DER. Up to this point, any improvements to the grid required by the utilities in order for solar projects to receive permission to interconnect have been on the back of solar developers. As a result, some projects will be more costly than other projects of equivalent size and type because of these elevated interconnection costs. It is not that the projects requiring such upgrades are delivering any less value to the end user or to society at large. In fact, the investments made by these projects are likely to directly benefit the distribution grid in a particular location. Those investments may also create room for other DER projects or other customers that share that circuit to expand their utility usage without any cost consequence.

The challenge of more costly interconnection should be addressed in a working group session this fall. Topics for discussion should include non-wire alternatives, adders to cover those non-wire alternative costs, and a broad socialization of the cost of the utility upgrades required to facilitate interconnection. More generally, an interconnection working group that meets regularly can provide transparency, better interconnection management and opportunities for innovation with respect to interconnect and related processes across the solar sector.

Managing queues:

Projects should be subject to meeting clearly defined criteria for project readiness in order to be accepted for a fixed incentive. The Board may also consider security deposits that will provide discipline and discourage speculative applications.

Once a project is accepted for a fixed incentive, the larger more complex projects should be subject to reporting requirements that demonstrate progress towards project maturity milestones. In CCSA's experience in other state programs, strong maturity requirements, such



as permits in-hand, and completed interconnection studies, allow a market to be “always-on” and don’t require regulators to actively manage the market.

Agricultural Benefits:

Community solar projects allow farmers to stay in operation by utilizing a small portion of their land for a solar facility, generating additional revenue without losing valuable farmland to development. Small ground-mounted systems are installed to protect the health and well-being of the land through soil protection, flooding mitigation, removable racking, and minimal use of concrete. With improvements to solar panel technology, ground-mounted projects can more efficiently harvest the sun at a lower cost to consumers. Ground-mounted projects can be further enhanced through dual use technologies to promote sustainable land management practices, supporting natural ecosystems by cultivating small crops or pollinator-friendly vegetation beneath the solar array. We recommend the addition of agricultural use as a category.

Cadmus Modeling:

CCSA appreciates the thoughtfulness and the process the Board and Staff have implemented to develop a revamped solar market for New Jersey. Cadmus’ modeling is prudent and deliberate. Overall, CCSA generally believes that most of the assumptions are appropriate with a few critical deviations.

CCSA is very concerned about the minimum incentive levels for the community solar cases that are included in Table 30 of the report. CCSA has been unable to replicate these numbers and it is not clear how these cases have produced such substantially lower incentive values for community solar projects relative to other similar project types. These cases do not accurately reflect current community solar project costs. CCSA believes the discrepancies are likely due to errors in assumptions around specific yield, EPC costs, community solar administration costs, and underestimating the lease rates currently seen in the market.

The values are also a significant reversal from the methodology that the BPU relied on in determining the factors under the TREC. From the information contained in the report, it is not clear to CCSA the reasons for this significant discrepancy, which represent as much as a 60% reduction in incentive value for community solar from TREC levels. A change in incentive value of this magnitude from the TREC to the Successor is not warranted and would be a major disruption to the current market.





As currently proposed, these incentive levels would likely not be sufficient to support the vast majority of community solar projects in New Jersey, particularly those on preferred siting. While the points below may address some of these discrepancies, CCSA believes Cadmus and the BPU need to more fully investigate the assumptions made for community solar in order to address this major issue and determine the source of the deviation. CCSA is ready to assist the BPU and Cadmus in this effort.

CCSA also encourages Cadmus and the BPU to keep in mind the interplay between revenue from fixed incentives and variable rates. Community solar project revenues are a blend of the two, but for financing purposes those dollar amounts are not necessarily equivalent. For project financing, a higher percentage of project revenue coming from fixed incentives is more favorable than the alternative, which is seen to carry greater risk. This is a major advantage of a fixed compensation model. For community solar, an increase in the value of the fixed incentive is more significant for ultimate project viability than an escalation in variable rates.

Based on our analysis, the Cadmus modeling assumes all projects are able to safe harbor under the 2020 ITC. The BPU should not assume that all projects are able to safe harbor and it doesn't make sense to assume that community solar projects are safe harboring in 2020 when it's unknown if they'll be accepted to the program until 2021. On a broader scale, safe harboring strategies differ significantly depending on each SAM case. Given the timelines for program design and implementation, this is not a safe assumption for community solar projects.

Lastly, we recommend increasing the modeled community solar project capacity from 3 MW to 5 MW, for the life of the project, to facilitate a more cost-effective market through economies of scale.

The specific energy production (SEP) capacity factor for ground mount installation (16.2% to 16.5%) seems reasonable but capacity factors for the other project types as shown in Table 15 on page 37 are too high. These values range from 14.2% for Residential Roof to 15.7% for Commercial Roof, which is higher than the 13.2% used in 5.1% SREC Milestone analysis. While it is reasonable to assume that newly installed systems will outperform the current fleet average, except for the ground-mount systems, the system design assumptions (tilt, azimuth, system losses) should be adjusted to reduce the capacity factor assumptions by 1% for each project type.

It is critical that Community Solar installations be modeled with a lower PPA escalation rate. The 2.4-2.5% escalation assumption of retail and PPA rates is generally too high. Current PPA



escalation rates are generally 1.5% and lower (even 0%). Although the retail rates are forecast to escalate, New Jersey retail rates have been flat (even slightly declining) for the past decade. Most customers will not accept anything more than a modest escalator. Moreover, many of the costs that will drive retail rate increases over the next 15 years are not offset by Community Solar net metering, per the Board's Orders on community solar credit, e.g. OREC charges, SBC, and ZEC charges are not included in the calculation. Accordingly, Community Solar projects should receive a 0% escalator in the SAM modeling to reflect these market realities.

In conclusion, CCSA highly recommends aligning the permanent program with the SREC successor program with an increase in capacity for this market segment. Applying an adjustable block fixed incentive for the community solar market will provide the market certainty to stimulate investments and increase access to solar for all. CCSA looks forward to working closely with BPU staff through the working group process and hopes to remain a resource for community solar market development.

Sincerely,

Leslie Ann Elder  
Community Solar Access