

# Arcadia

October 21, 2022  
Community Energy Storage Proposal  
In the Matter of the New Jersey Energy Storage Incentive  
Docket No. QO22080540

TO: New Jersey Board of Public Utilities Staff  
FR: Arcadia Power, Inc.

## I. Arcadia Background

Arcadia Power, Inc. (“Arcadia”)<sup>1</sup> builds the software necessary for everyone in New Jersey to realize the full benefits of clean energy. Arcadia currently has customers in all 50 states and has company roots in the mid-Atlantic region, Arcadia manages community solar subscribers totaling more than 1 Gigawatt and 100,000 subscribers in 13 states -- including New Jersey -- and Washington, DC.

This broad and deep experience informs the following comments which are respectfully submitted to New Jersey Board of Public Utilities (“BPU”) staff in response to the October 21, 2022 Storage Incentive Program (“SIP”) Stakeholder Meeting. While Arcadia intends to submit more detailed and extensive written public comments following the final SIP stakeholder meeting, we submit these initial comments to suggest the BPU staff consider a Community Storage Program and also an energy storage incentive as an add-on to community solar projects -- Community Solar Plus Storage Program.

As mentioned above, Arcadia has customers throughout all 50 states and has deep experience with energy storage and solar programs in the mid-Atlantic/Northeast region. Arcadia is uniquely qualified to provide these comments in response to the SIP straw proposal and the directive for SIP stakeholder meeting 1 to focus on best practices and energy storage programs in other states.

To this end, we will begin with a brief outline of programs that Arcadia recommends that the BPU implement in New Jersey and then we will identify programs in New York and Massachusetts as case studies of successful programs that could be used as models but improved upon in New Jersey so that the state can continue its portfolio of successful and innovative programs as a leading state in renewable energy programs.

Please accept this brief, initial overview for staff consideration early in the stakeholder process and know that Arcadia is willing to answer any questions from BPU staff upon request. The BPU can expect more detailed comments following the final SIP stakeholder meeting.

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<sup>1</sup> In December 2019 Arcadia Power rebranded to ‘Arcadia’.

## II. Innovative Storage Incentive Programs for BPU staff to Consider

### 1. Community Storage Program

- a. Similar to the Community Solar Program but the energy and savings come from energy storage.
- b. Rather than solar energy generation being sold to community subscribers to reduce energy bills, energy would be stored (specifically, batteries would be charged) during off-peak hours and then dispatched to subscribers during on-peak hours.
- c. Implement a value stack or Time-Of-Use (TOU) rate to incentivize battery charging when energy demand and costs are lowest and energy dispatch when demand and cost are highest.
- d. This would reduce peak load demand, further reduce carbon footprint, and would allow access to the benefits of energy storage in underserved communities.
  - i. This should embody an on-peak vs. off-peak differential of at least 3:1.
- e. Adopt regulations governing innovative standalone community storage models that can provide financial benefits to New Jersey residents, particularly low and moderate income households and those in communities most affected by fossil fuel generation siting.
  - i. Build off the Board's successful community solar program – this program will have subscribers who receive on-bill credits and guaranteed savings applied to their monthly power bill.
  - ii. Projects will be capped at 5MW.

### 2. Community Solar Plus Storage program

- a. Like the Community Storage proposal above, this program will need a Time-Of-Use rate to shape charge and dispatch times around off-peak and peak hours.
- b. Modify the existing and already successful community solar program, by allowing developers to pair their solar array with a storage component for an added financial incentive.
  - i. To comply, projects will need a value stack or otherwise agree to dispatch at certain times and during critical grid events, as necessary to improve grid reliability and lower overall energy costs.
- c. The increased credit value for the community solar plus storage system will translate into more bill credits for more subscribers.

### III. **Best Practices in Other States**

#### 3. New York

##### a. Value of Distributed Resources (VDER) or Value Stack model

- i. A tech-agnostic approach compensating renewable energy projects at a rate based on when and where it injects electrons onto the grid.

1. Elements of the Value Stack include:

- a. Energy - Based on the New York Independent System Operator's Day Ahead hourly zonal locational-based marginal price, inclusive of losses.
- b. Capacity – Based on installed capacity.
- c. Environmental Value – Fixed Renewable Energy Certificate price to account for environmental attributes of distributed generation.
- d. Demand Reduction Value – additional locational-based value for contributing clean generation during peak demand hours, which can be optimized via energy storage.<sup>2</sup>

2. A storage project injecting electricity into the grid in rural, upstate New York on a cool fall afternoon will receive a lower VDER incentive than a storage project in downtown Manhattan injecting electricity during peak demand hours during a heatwave.

3. In New Jersey, Energy Storage Projects, particularly Community Storage Projects, may receive a higher VDER in Environmental Justice areas and underserved communities and in areas with the greatest peak demand.

##### b. Community Storage

- i. As outlined above, New York Currently has a “community storage” program that in large part mimics the community solar program and benefits from the same incentives from the value stack and the community distributed generation (CDG) program.
- ii. The robust pipeline of such projects slated to come online in 2023 and 2024 underscores the success of this program.

##### c. Community Solar Plus Storage

- i. In New York, these projects also benefit from the value stack and CDG program
- ii. Participating projects would then receive a higher credit rate (say the existing rate plus a few additional cents per kWh) for each kWh injected into the grid,
- iii. Those credits would then flow to subscribers.

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<sup>2</sup> New York State Energy Research and Development Authority. NY-SUN. The Value Stack.  
<https://www.nyserda.ny.gov/All-Programs/ny-sun/contractors/value-of-distributed-energy-resources>

#### 4. Massachusetts

##### a. Solar Massachusetts Renewable Target (SMART) program

- i. One component of this program is to shift the benefits of solar production to meet peak demand, particularly in underserved communities.
- ii. Rather than export solar electricity contemporaneously throughout the day as it is generated, this program adds a storage component to community solar (and other solar projects) and allows storage facilities to access additional revenue streams for injecting electricity into the grid when it is most valuable to the grid and the project.
- iii. New Jersey could add this as a retrofit to existing community solar projects or incorporate it as an added incentive or scoring mechanism in future community solar applications or bids.

- b. Massachusetts currently has 72 operational community solar plus storage projects. These projects have a combined solar capacity of 245 MW and are paired with storage facilities that have a combined capacity of 173 MW / 453 MWh. In addition, there are 107 solar plus storage projects in the pipeline. These projects have a combined solar capacity of 288 MW and are paired with storage facilities that have a combined capacity of 250 MW / 766 MWh.<sup>3</sup>

#### IV. **Conclusion**

We appreciate the opportunity to provide these proposals to the energy storage program and look forward to our continued work with BPU and interested stakeholders. Please contact James Feinstein at [James.Feinstein@arcadia.com](mailto:James.Feinstein@arcadia.com) or 202 999 8916 if you would like to discuss these matters further.

Sincerely,



James Feinstein  
Senior Policy Manager  
Arcadia

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<sup>3</sup> Massachusetts Department of Energy Resources' Renewable and Alternative Energy Division. Lists of Qualified Generation Units. <https://www.mass.gov/service-details/lists-of-qualified-generation-units>