



New Jersey's Dual Use Solar Energy Pilot Program Stakeholder meeting



November 29, 2023

Welcome

This is the public stakeholder meeting for

Docket No. QO23090679
In the Matter of the
Dual-Use Solar Energy Pilot Program

This meeting will focus on all parts of the Dual-Use Solar Energy Pilot Straw Proposal released on November 21, 2023.



Webinar Instruction Page

- All attendees will be automatically muted.
- Questions? Please use the Q&A function in Zoom.
- We will address clarifying questions at the end of the presentation. These will be collected as FAQ and posted on our website as relevant.
- Please note that the Chat function in Zoom is not available for this meeting.
- This meeting is being recorded. A copy of the recording and slides will be made available on the BPU website:
<https://www.nj.gov/bpu/newsroom/public/>



Disclaimer

This presentation is provided for informational purposes only and should not be taken to represent the views of the New Jersey Board of Public Utilities, its Commissioners, or the State of New Jersey. Please be aware that any information presented is subject to change if there are changes to New Jersey statutes, rules, or policies.

All viewers are responsible for ensuring that they rely only on current legal authority regarding the matters covered in the presentation.



Written Stakeholder Comment Guidelines

- The deadline for comments on the Dual Use Solar Energy Pilot Straw is 5:00 p.m. ET on Wednesday December 13, 2023
- Please submit comments directly to Docket No. QO23090679, using the “Post Comments” button on the Board’s Public Document Search tool.
- Comments are considered “public documents” for purposes of the State’s Open Public Records Act and any confidential information should be submitted in accordance with the procedures set forth in N.J.A.C. 14:1-12.3.
- Written comments may also be submitted to:
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What is the Dual-Use Solar Energy Program?



NEW JERSEY
DEPARTMENT OF AGRICULTURE



- The Dual-Use Solar Energy Act requires BPU to develop rules and regulations for dual-use solar in New Jersey.
- BPU's process for developing new programs typically involves developing a Staff Straw Proposal for public stakeholder input.
- BPU has contracted with the Rutgers Agrivoltaics Program (RAP) to assist with this process for dual-use solar.
- After stakeholders have provided their input, BPU will finalize the program, including eligibility criteria, operational requirements, and processes.
- We're here today to discuss the recently issued Staff Straw Proposal ... and to hear from stakeholders like you.

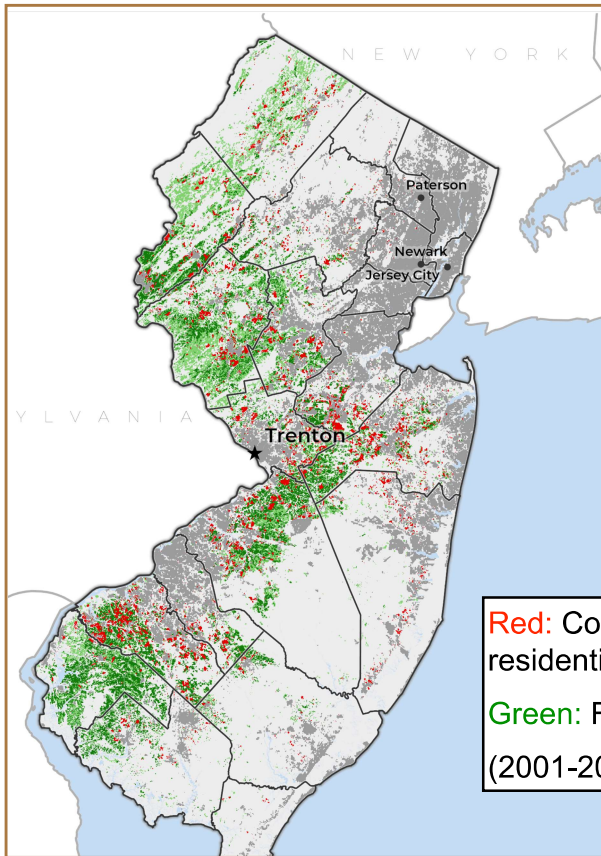
Solar energy is important to New Jersey's energy future



Rutgers Snyder Farm

- To meet the goals of the 2019 Energy Master Plan, the Solar Act of 2021 established a framework for a successor solar incentive program.
- To implement the Solar Act, BPU established two separate solar incentive programs:
 - Competitive Solar Incentive Program (CSI): for grid supply & net metered projects greater than 5 MW
 - Administratively Determined Incentive Program (ADI): for net metered projects less than 5 MW
- The CSI and ADI programs specify how certificates for solar energy production—Solar Renewable Energy Certificate-IIs (SREC-IIs)—are provided and how their value is determined.

Protecting farmland in New Jersey is important, too



Red: Converted to residential/urban uses
Green: Farmland
(2001-2016)

Source: American Farmland Trust



Solar farm: No more room for agriculture



Naval Weapons Station Earle in Tinton Falls, NJ

Many types of dual-use arrays are possible, depending on farm goals



Rutgers RAREC Farm



Rutgers Snyder Farm

- Elevated dual-use arrays can be fixed-tilt or designed to track the sun on one or two axes.
- At Rutgers research farms, plots with single-axis tracker arrays will be planted with hay, commodity crops and vegetables.

Many types of dual-use arrays are possible, depending on farm goals



Rutgers Animal Farm



Vertical bifacial panels, Germany

- Vertical arrays with bifacial panels are also called “solar fences.”
- At the Rutgers Cook Campus Animal Farm, plots with vertical bifacial arrays will be planted with forage crops and used for grazing livestock.

The Dual-Use Solar Energy Act is the first New Jersey legislation to focus on how solar projects can be built without taking farmland out of production



Rutgers RAREC Farm

History of state legislation on solar and agriculture:

- 2009 legislation required the State Agriculture Development Committee (SADC) to establish rules for how farm-based solar would affect Farmland Assessment Taxation, Right-to-Farm, and farmland preservation.
- Energy Master Plan of 2010 recommended that solar incentives should not be provided to solar projects on farmland.
- Solar Act of 2012 gave BPU discretion to approve some solar projects on farmland. As a result, 200 MW of solar was installed (of 600 MW proposed), and the farmland for these projects was taken out of production.
- The Dual-Use Solar Energy Act aims to facilitate solar projects on working farmland, while keeping the farmland in continued agricultural production.

Dual-Use Solar Pilot Program: A program to advance and study agrivoltaics in New Jersey



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The Pilot Program:

- Will be the end product of the program development process in which BPU is now engaged (this meeting is part of it)
- Seeks up to 200 MW generating capacity from dual-use solar in the first 3 years, with additional capacity if program is extended
- Will establish a process for BPU to solicit, evaluate and approve proposals to build and operate dual-use solar arrays on farmland in New Jersey
- Will last for at least 3 years, with a possible extension of 2 more years (5 years total)
- Has a 10-MW capacity limit for each dual-use project proposed
- Is intended to serve as the basis for a permanent dual-use program in New Jersey

Dual-Use Solar Pilot Program: A program to advance and study agrivoltaics in New Jersey



Rutgers Animal Farm

In order to participate in the program, applicants:

- Must apply and be selected through a competitive process.
- Must commit to keeping farmland with dual-use solar in active agricultural/horticultural use
- May propose a monetary incentive in the form of a SREC-II (certificate for producing solar electricity that can be sold to the SREC-II administrator).

Dual-use projects:

- Cannot be sited on “prime agricultural soils and soils of statewide importance,” unless undertaken as part of a research study with a New Jersey agricultural institution
- Cannot be sited on wetlands or in Highlands/Pinelands preservation areas, unless a waiver is granted by BPU
- Cannot be sited on farms in the New Jersey Farmland Preservation Program

Application rounds may start with pre-qualification

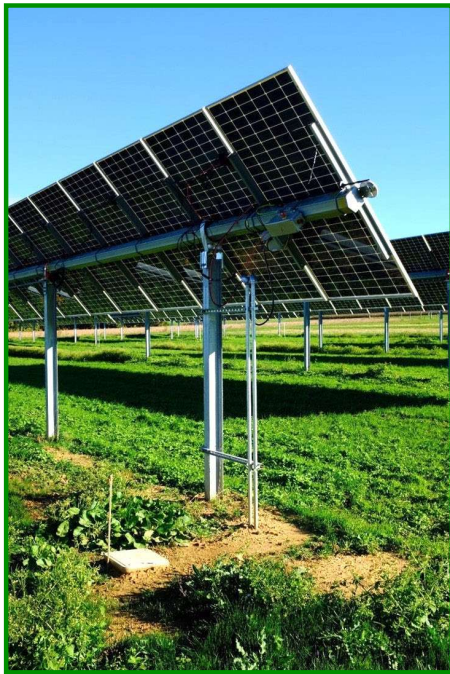


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Pre-qualification

- At least three “rounds” for applications to the program are currently being considered—in 2024, 2025, and 2026. Additional rounds may occur in 2027 and 2028.
- Each round, interested parties would first be invited to submit a “pre-proposal” for their project, that provides:
 - A description of the land parcel
 - Preliminary array design
 - Proposed agricultural/horticultural use
- BPU (with RAP assistance) would provide feedback on pre-proposals, encouraging some and discouraging others

After feedback on pre-proposals, applicants may submit a Full Application with a Construction, Operations, Monitoring and Project Research Plan (COMPR)



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COMPRs will include many elements, including:

- Specifications for the planned solar array:
 - Array type: fixed-tilt, single-axis tracking, vertical bifacial, etc.
 - Design specifications: row height, orientation, spacing, etc.
 - Fencing plans
- Plans for continued agricultural/horticultural use:
 - At a minimum, project land must maintain farmland tax eligibility
 - Applicants must report on pre-construction soil quality, to assess erosion potential during and post-construction
 - Applicants must propose a means of monitoring and verifying continued agricultural/horticultural use throughout the project
 - Applicants should also propose research on crop performance in conjunction with dual-use solar (conducting research is mandatory for projects in ADAs)

Very important!!

After feedback on pre-proposals, applicants may submit a Full Application with a Construction, Operations, Monitoring and Project Research Plan (COMPR)



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COMPRs will also include:

- Interconnection plans: projects further along with planning or gaining approval for interconnection will be scored higher
- Proposals for minimizing negative impacts to farmland, including from soil compaction and soil erosion from runoff. Possibilities include:
 - Comparing soil characteristics pre- and post-construction
 - Listing conservation practices that will be implemented
- Proposals for addressing stormwater runoff
- Proposals for decommissioning: what will happen when the array has reached the end of its useful life?

Research will be an important part of the Dual-Use Pilot Program



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COMPRs should include proposals for research:

- Projects within ADAs are required to participate in original research in partnership with a New Jersey educational institution
- Projects not within ADAs are required to include a proposal for research with their application
- Research at dual-use projects may include gathering data on:
 - Crops grown and crops performance
 - Solar array performance
- Approved research plans may be required to include control plots (with no arrays) of equal area to those plots being farmed with dual-use arrays

Research through the Pilot Program will lay the groundwork for a permanent program

*Dual-use solar projects will be eligible for increased incentives,
relative to conventional, non-agricultural solar*

COMPRs will include a proposed incentive:

- ADI-eligible projects would qualify for a baseline incentive in an existing ADI market segment and propose in the dual-use solicitation an additional incentive (“add”), due to:
 - Construction costs for dual-use solar that are higher than for conventional solar
 - Costs associated with research and data collection that are not covered by a collaborator (like a university)
 - Reduced electricity production due to array design for dual use
 - Declines in crop yield or revenue due to the presence of the array
- Option 1: CSI-eligible applicants would participate in a CSI solicitation to establish a baseline incentive and propose an adder in the dual-use solicitation as described above.
- Option 2: CSI-eligible applicants would propose an “all-in” SREC-II price by participating in the dual-use solicitation with baseline value derived from the lowest bid in the relevant CSI solicitation tranche.



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Dual-use solar can provide benefits to farmers... and New Jersey

- Farmers derive new revenue, or reduced costs, from generating electricity.
- In addition to existing solar incentives, farmers may receive an added economic incentive from being part of the Dual-Use Pilot Program.
- Crop yield and performance can continue to be strong with dual-use solar.
- *All while producing 100% clean energy for New Jersey*



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There are many ways to learn more about dual-use solar



- The Rutgers Agrivoltaics Program will be hosting dual-use solar workshops for farmers, landowners, and solar engineers, starting in 2024. Look for announcements next year!
- The AgriSolar Clearinghouse is a great place to look for resources for dual-use solar—including case studies, farm plans, research, and funding opportunities. www.agrisolarclearinghouse.org/



Haywagon tour of
Rutgers Snyder Farm

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