

**Rutgers**  
**Agrivoltaics**  
**Program**

New Jersey Agricultural Experiment Station

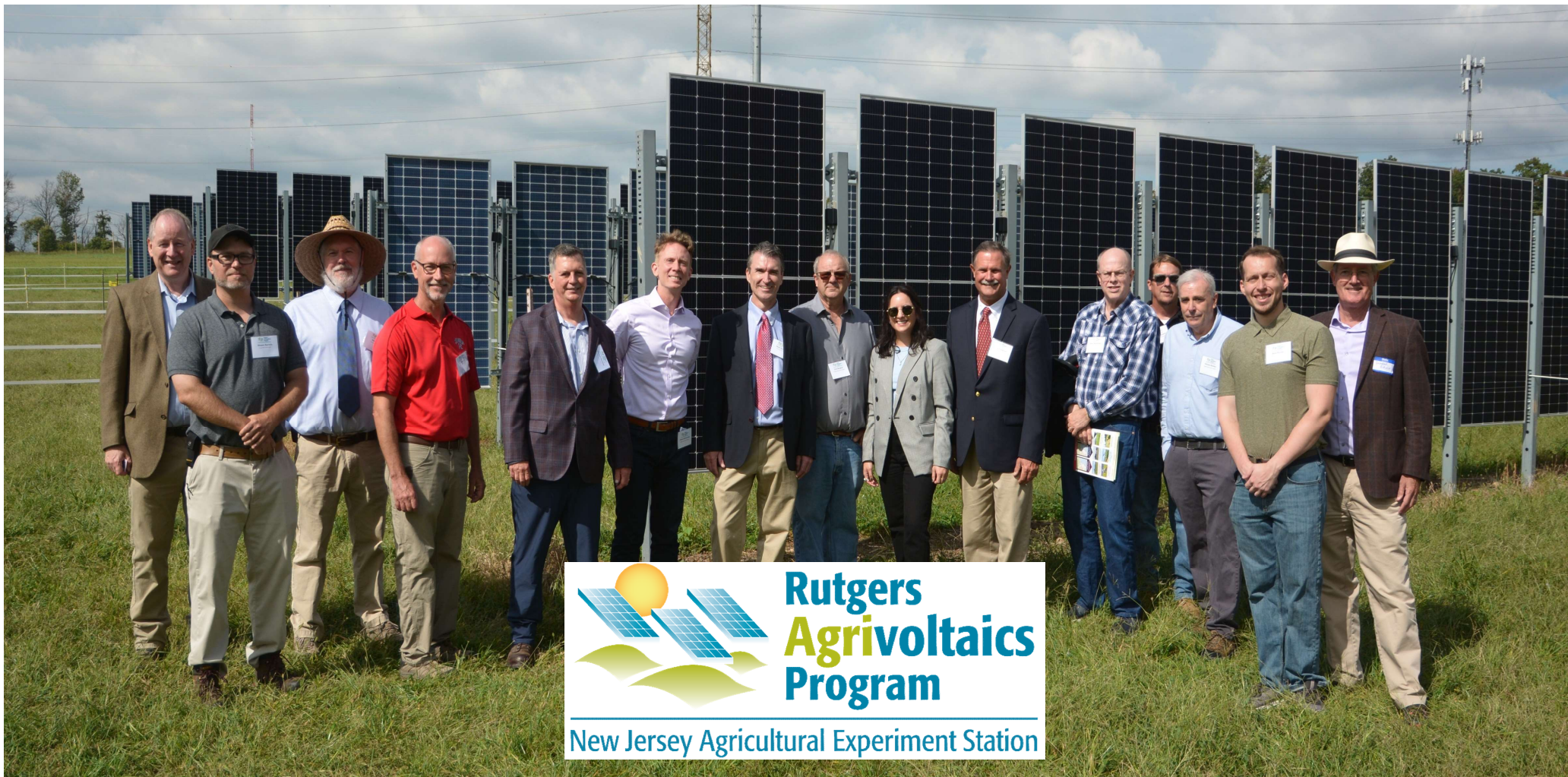


# **BPU Dual-Use Solar Energy Pilot Program Update**

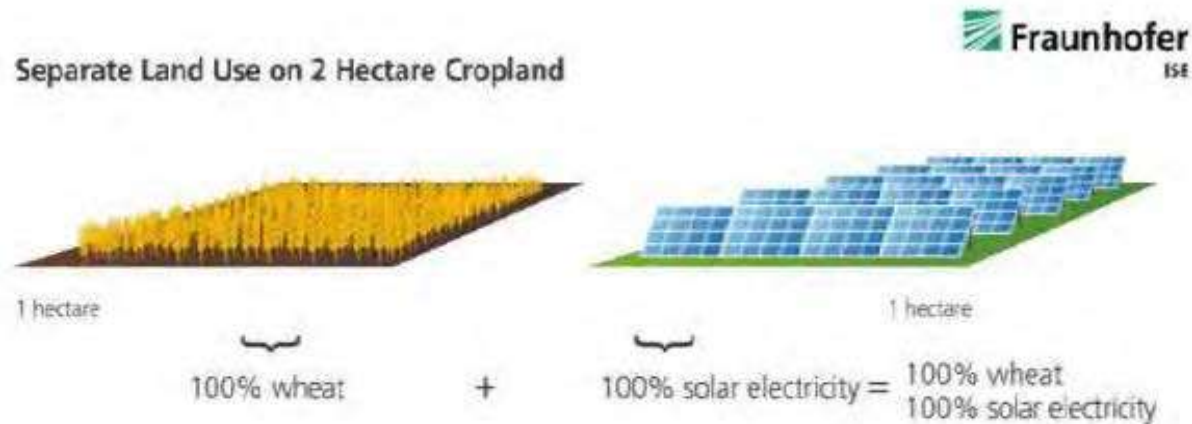
**2025 NJ Agricultural Convention**  
**Dave Specca, RAP Lead**



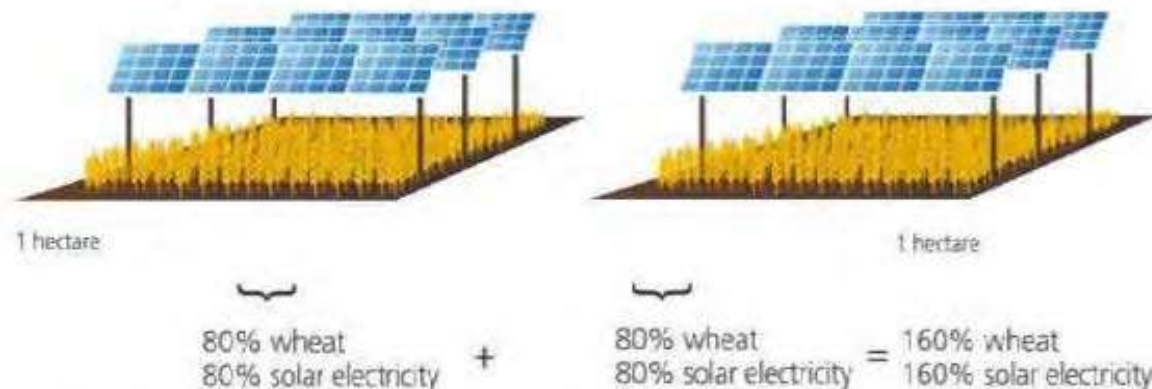
*Rutgers Agrivoltaics Program Team (Sept. 2024)*  
*Plant Sciences, Animal Sciences, Engineering,  
Economics, Social Science, Environmental Sciences,  
Agronomy, Soil Science, Meteorology*



# *Dual-Use offers the potential for greater Land Use Efficiency*



Combined Land Use on 2 Hectare Cropland: Efficiency increases over 60%





# *What is the Dual-Use Solar Energy Pilot Program?*



- 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, Draft Rules and Final Rules 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.



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



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## The Pilot Program:

- 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
- Program 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

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

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



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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 an “adder” to the SREC-II (certificate for producing solar)

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



Rutgers Animal Farm

## Dual-Use projects:

- Cannot be sited in Ag Development Areas (ADA's) on "prime agricultural soils and soils of statewide importance," unless undertaken as part of a research study with a New Jersey institution of higher education
- 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 will start with pre-qualification or Expression of Interest (EOI)*



Rutgers Snyder Farm

## Pre-qualification

- At least three “rounds” for applications to the program are currently being considered—in 2025, 2026, and 2027. Additional rounds may occur in 2028 and 2029.
- Each round, interested parties would first be invited to submit an Expression of Interest (EOI) for their project, that provides:
  - A description of the land parcel
  - Preliminary array design
  - Proposed agricultural/horticultural use
  - <https://www.njcleanenergy.com/renewable-energy/programs/dual-use-solar-pilot-program>
- BPU and Dept of Ag (with RAP assistance) would provide feedback on pre-proposals, encouraging some and discouraging others
  - 2025 EOI application period ends on February 14th



# *NJ Farm Characteristics by product classification for the Dual-Use Pilot Program*

Product Classification	Farms (#)	Cropland (acres)	Total sales	Percentage of cropland
<b>Crop production</b>				
Oilseed and grain	810	161,641	\$77,955,000	39.3%
Other crop farming	2,143	78,489	\$43,913,000	19.1%
Vegetable and melon	895	65,221	\$226,747,000	15.8%
Fruit & tree nut, nursery & floriculture	1,886	60,085	\$514,812,000	14.6%
Strawberry and berry farming	212	13,751	\$97,852,000	3.3%
<b>Animal production</b>				
Cattle, beef, and dairy farming	792	24,272	\$35,816,000	5.9%
Other animal production	1,728	4,467	39,441,000	1.1%
Horse and other equine	1,312	3,726	28,781,000	0.9%
<b>Total</b>	<b>9,778</b>	<b>411,652</b>	<b>\$1,065,317,000</b>	<b>100.0%</b>

Source: 2017 Census of Agriculture, USDA, National Agricultural Statistics Service

# *After feedback on EOI's, applicants may submit a Full Application with a Construction, Operations, Monitoring and Project Research Plan (COMPR)*

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 utilizing a control area for comparison is mandatory)

Very important!!



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# *Pilot Program Research Requirements*



- Management and collection of the data listed under (A) through (M) in the Board Order for the first three (3) years of a Selected Project by the Board or its designee will be at no cost to the participant. Participants may choose to contract with a non-Board appointed entity to collect the data at their own cost.
- The Board's designee in this case is the Rutgers Agrivoltaics Program (RAP) at Rutgers University.
- RAP will contact the Project Team of an EOI application after it has been encouraged to apply for the full NOIA application to discuss the details of the research program.

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



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- Eligible projects would qualify for a baseline incentive in an existing ADI or CSI market segment and propose in the dual-use solicitation an additional incentive (“add-on”), 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



# *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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# *Some helpful websites and courses*

- BPU's Dual-Use Solar Pilot Program

<https://www.njcleanenergy.com/renewable-energy/programs/dual-use-solar-pilot-program>

- Rutgers Agrivoltaics Program

<https://agrivoltaics.rutgers.edu/>

- Dual Use Pilot Program Frequently Asked Questions: for Farmers

<https://www.njcleanenergy.com/renewable-energy/programs/DU-FAQs>

- Rutgers Agrivoltaics Program Resources Page

<https://agrivoltaics.rutgers.edu/resources/>

- American Farmland Trust - Technical Assistance Program for Agrivoltaics: Farmer Curriculum

<https://farmland.org/>





# Thank You!

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