



June 24, 2024

Sherri L. Golden
Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, NJ 08625-0350
[Sent via email: board.secretary@bpu.nj.gov]

American Farmland Trust – Additional Comment RE: Docket No. QO23090679 In the Matter of the Dual-Use Solar Energy Pilot Program

Dear Secretary Golden,

American Farmland Trust (AFT) appreciates the opportunity to provide additional comment on the Dual-Use Solar Energy Pilot Program.

Founded in 1980, AFT's mission is to save the land that sustains us by protecting farmland, promoting sound farming practices, and keeping farmers on the land. AFT recognizes that fulfilling this mission depends on America's farmers and ranchers, and their ability to operate viable farm businesses. In addition to being a leader in federal agricultural policy, AFT works across the nation at the state and local level to advance policies to achieve its mission. AFT's Smart Solar program is actively engaged in regional and national work to develop best practices, standards, and policies related to the development of solar energy facilities on agricultural lands.

New Jersey anticipates approximately 30,000 MW of solar capacity to meet state clean energy targets, likely requiring 150,000 – 300,000 acres (based on industry estimate of 5-10 acres per MW). Anticipating this challenge, AFT's New York/New Jersey Regional program established a formal collaboration with Rutgers University to develop an agrivoltaics training program for New Jersey farmers. Funding for this partnership was secured through a highly competitive award from the US Department of Energy's Foundational Agrivoltaics Research at Megawatt Scale (FARMS) program. This training program is premised upon the development of a robust, timely and well administered dual-use solar program that will spur demand for farmer engagement technical assistance involving Extension professionals, service providers and solar experts across New Jersey in coming years.

AFT commends New Jersey for being a trail blazer in passing the Dual-Use Solar Energy Act of 2021 (P.L. 2021, c. 170, “Dual-Use Act” or “Act”) which directed the New Jersey Board of Public Utilities (BPU), in consultation with the Secretary of Agriculture, to adopt rules establishing a Dual-Use Solar Energy Pilot Program. AFT is invested in helping BPU and stakeholders develop a successful Pilot Program. AFT respectfully acknowledges that time is of the essence to formalize and launch New Jersey’s dual use pilot program to take advantage of innovative projects some of which have been in development for quite some time.

As stated in the Request for Comment:

The Pilot Program for the development of dual-use solar projects on productive farmland (also known as “agrivoltaics”). The Pilot Program is designed to **encourage the development of dual-use solar facilities** and the **creation of a new segment of the solar industry** in New Jersey that is compatible with the State’s rich agricultural heritage. Specifically, the Pilot Program seeks to **demonstrate and study the compatibility** of active agricultural or horticultural production and solar photovoltaic infrastructure on the same land/property. (emphasis added).

In our view, such a program should encourage a diverse portfolio of commercially viable, farmer-centered dual-use solar projects representing a variety of array configurations, nameplate capacities, farmer backgrounds, and agricultural plans. Ideally, the dual-use projects will be distributed geographically across the state encouraging a range of agricultural products on a variety of soil types to demonstrate a range of project configurations and farm plans reflective of farmer interests and agricultural markets.

Importantly, the pilot program should also initiate new employment and income opportunities for producers, agrivoltaics specialists and service providers to serve across New Jersey’s farm-energy-water nexus.

AFT has published a comprehensive set of state and local policy recommendations for Smart SolarSM. We encourage BPU and other Pilot Program participants and stakeholders to review AFT’s recommendations.¹

Please see below for additional comment regarding BPU’s preliminary draft rule for the Dual Use Pilot Program.

Facilitate Efficient Data Collection and Project Research

AFT defines agricultural dual-use solar (*agrivoltaics*) as the integration of agricultural production and solar energy generation on the same piece of land throughout the life of the solar array. The outcome of the Pilot Program should be to facilitate rigorously designed projects and farmer-developer partnerships that keep land in farming as solar deployment expands to meet the New Jersey’s Renewable Portfolio Standard and implement the state Energy Master Plan.

¹ <https://farmland.org/aft-releases-smart-solar-recommendations-to-help-policymakers-advance-solar-and-strengthen-farm-viability/>

Data collected during the pilot will help to inform further refinements and ultimately a permanent dual use solar program. Again, manageable reporting requirement and collaborative approach from BPU and relevant agencies will be essential in encouraging farmer engagement and landowner interest.

The Pilot Program should encourage and facilitate standardized data collection (including from third party qualified contractors or research institutions) in order to efficiently aggregate and share data from Pilot Program arrays with state and federal agencies, researchers, and other stakeholders. The goal should be to inform and advance the viability of future agrivoltaics. Importantly, data collection, including costs of environmental sensors and other research related equipment, should not create undue burden on farmers without compensation.

Bonus points should be considered for projects that include research to show how agrivoltaic project(s) can improve water usage, soil health, and land access—especially for historically marginalized and limited-resource producers.

Performance verification and field visits to ensure farming activities continue and to assess changes in agricultural practices as circumstances may be warranted over the 20-30 year project life. For the research period, AFT agrees that farmers should be allowed to update or amend their 3-year plan if conditions require a shift in agricultural or horticultural practices (e.g., crop rotation, switching from grazing animals to hay production, or switching to different production system) in consultation with BPU.

AFT appreciates BPU's clarity on auditing compliance and, if necessary, enforceable financial mechanisms for noncompliance if active agricultural or horticultural use of the land is impaired or discontinued beyond a reasonable probation and cure period.

For the 3-5 year Pilot Program, AFT encourages BPU and/or Rutgers University to virtually convene stakeholders on an annual basis to share insights on the Pilot Program, invite program participants to share examples and testimonials, and to provide a program summary to other state energy offices and departments of agriculture.

Prioritize farmer centered dual-use

Pilot Program applicants should be able to demonstrate that they are actively engaging with a farmer who has a viable farm business plan that considers soils, infrastructure, support services, water access, farm succession, and market access/customer segments for the farm product(s) that will be produced following installation.

Developers should demonstrate how the specific solar array is designed to meet the farmer's needs in supporting a viable farm operation (e.g. water wells for grazing animals, water supply and infrastructure for irrigation, and panel height and row spacing to accommodate farm machinery). Critically, the Pilot Program should favor projects designed for flexibility in order to respond to changes in market demand over the 20-30 year life of the project.

AFT also encourages BPU to make it explicitly clear that "force majeure" such as extreme weather, or other similar events beyond the control of farmer, landowner, or project developer are exceptions to

the non-compliance recourse. Clarity on force majeure, remedy terms and non-compliance requirements will be essential for developers to secure financing and insurance for agrivoltaic projects.

Define a feasible control area appropriate to the research

The proposed 3-acre minimum is an improvement over the BPU's straw proposal of a universal requirement for a 50% field trial area. AFT's understanding is that projects seeking to participate in the Pilot Program are likely to be in the 1-5 MW capacity range due to interconnection and site constraints. For project areas smaller than 10 acres, AFT would support consideration of a more limited control requirement such as 10% of solar project area (eg 1 acre required for 10 acre project area). AFT supports a minimum control area of 0.5 acres for the smallest sites (eg 5 acre site).

While the research intention in the Pilot Program is laudable, this is not primarily a solar research program. Rather, the real innovation in BPU's effort is to demonstrate that projects of commercial MW scale can maintain active agricultural or horticultural use on established farming operations. Projects of a more experimental, research purpose have a place in the Pilot Program and may deserve separate consideration.

In any event, the practical impact of control requirements should be carefully considered with a farm viability lens. After the 3-year research period, it is not clear what the project team's responsibility will be for continued data collection from the control area. As we have seen with other agrivoltaics studies, a three year crop trial may be of limited practical research value.

AFT appreciates the BPU's interest in tracking challenges farmers encounter with agrivoltaics and soliciting feedback on farmers' views regarding possible public policies that would encourage or advance agrivoltaics in New Jersey. AFT would encourage an annual voluntary survey of participating farmers, landowners and solar developers to gather input on the practices and applications being applied under different array designs and using different equipment.

Encourage flexibility in research design and clarify research objectives

As noted in prior comment, New Jersey's Pilot Program should avoid narrow focus on crop yield comparison between array and non-array conditions. Rather, we encourage research that focuses on real-world production outcomes that demonstrate how farmers adapt their practices in an agrivoltaic array, how those practices influence farm income, soil conditions, crop yields and climate resilience, and how different array designs can best support the most productive shifts and greater financial resilience.

Clarify dual-use municipal permitting

The preliminary draft rule states that qualified dual-use projects will be considered a permitted use within every municipality. The final program rules should further define that dual-use projects do not require a special use or conditional use permit in accordance with statute. However, it should also be understood that these projects, especially those located in the ADA, may be subject to a higher level of community scrutiny.

AFT recommends that projects selected for the Pilot Program that are located in an ADA should be exemplary in terms of farmer input and engagement in project planning, municipal engagement and farmer input.

Allow dual-use Pilot Program projects to serve community solar customers

New Jersey's Energy Master Plan prioritizes access for marginalized and underserved communities. Dual-use projects up to 10 MW should be able to provide savings to residential and low-income customers through the community solar permanent program. BPU can leverage the additional capacity created for the dual-use program to expand the equity benefits of community solar, all while preserving farmland and efficiently using ratepayer funds. AFT recommends that for purposes of the Pilot Program, Dual Use projects up to 10 MW be considered for both the ADI and CSI programs.

AFT's understanding is that developers and farmers are also interested in smaller sites < 5 MW that would not be competitive in the CSI program. Furthermore, our understanding is that there is not a pathway for dual use projects to qualify under the ADI Community Solar Energy Program (CESP) to prohibition of community solar on certain farmland. AFT supports community solar and would be enthusiastic about projects that pair agrivoltaics with goals to serve low- and moderate-income households and local businesses through a limited offering in CSEP.

Incentive sharing for farmers

Adder incentives through CSI or ADI should encourage mechanisms for compensating farmers who participate in the research or have additional costs to integrate the dual-use. In other words, developers should be encouraged to pass a portion of the incentive on to farmers instead of retaining the incentive only for project Cap Ex. Incentive sharing will build farmer interest in the Pilot Program and offset additional costs farmers may face while accommodating research required during the pilot. Incentive sharing could allow for purchase or lease of farm equipment or farm infrastructure (eg. irrigation, livestock shelters, moveable paddock) as necessary to implement the dual-use farm plan if such equipment and infrastructure is not currently available or owned by the farmer.

Allocate capacity quickly and efficiently

It is anticipated that there will be significant pent-up market demand for the Dual Use program, given that the legislation was almost three years ago. AFT recommends a more ambitious timeline than 180 days to approve, approve with conditions, or disapprove a project. It is essential that BPU and Rutgers be prepared for strong interest in the program and support as many well qualified and viable Dual-Use projects as possible in the first Program Year. A more expedited review process, such as 90 to 120 days, would help to build early momentum for the Pilot Program and stimulate farmer interest. This is of particular importance given the timing of the Rutgers-AFT collaboration to develop the Technical Assistance Program for Agrivoltaics Systems (TAPAS), funded under the DOE FARMS program.

Factor farmer backgrounds and farmland conversion threat

AFT recognizes that the Dual Use program could provide a financial lifeline to small and mid-sized farms. AFT recommends that BPU specifically encourage Pilot Program projects that increase the viability of, or provide new or enhanced farming opportunities for, operations owned by historically marginalized farmers.

In addition, AFT recommends the BPU take into consideration the relative risk of conversion of project area to non-agricultural uses. Reviewers are encouraged to reference AFT's Farms Under Threat 2040 projections for county-level farmland loss. BPU and the Department of Agriculture can access AFT's Farms Under Threat - New Jersey profile and spatial data by contacting AFT or going to the website at <https://csp-fut.appspot.com/> and <https://development2040.farmland.org/>

Community Support

As noted above, AFT encourages BPU and Rutgers to promote listening sessions and/or virtual open houses to educate farmers, local officials and other interested stakeholders about the Pilot Program when it is formally announced. Relatively few farmers or agriculturally-oriented constituents are familiar with BPU proceedings and the formal process of releasing energy program solicitations.

AFT commends BPU, the Department of Agriculture, Rutgers and others advancing the Dual Use program. We look forward to working with stakeholders to make this a nation-leading program that delivers real benefits to New Jersey's agricultural community.

Thank you for your consideration and we would be happy to further discuss our comments at your convenience.

Ethan Winter, National Smart Solar Director | ewinter@farmland.org

Linda Garrett, New York/New Jersey Regional Director | lgarrett@farmland.org