DUAL-USE PILOT PROGRAM
GUIDANCE DOCUMENT FOR FARMERS/LANDOWNERS (2025)

This document contains questions Farmers/Landowners, primarily from the farming perspective, are encouraged to ask Solar Developers about a proposed project under the Dual-Use Solar Energy Pilot Program. The first section ("Critical Questions") lists key questions Farmers/Landowners should ask the Developer, followed by additional lists of questions on various topics that Farmers/Landowners and Developers may find helpful to discuss together, including "Financial", "Site Access and Communications," "Agricultural Plan," "Design of Solar Array," "Installation," and "Operation".

Farmers/Landowners are encouraged to keep their needs in mind their needs as a farmer during discussions with Developers. It's important that the Developer designs the solar array in a way that facilitates farming activities. For example, it is important to consider the turnaround area, or "headlands," at the end of the rows needed for certain farm equipment. Developers need to be aware of that requirement and incorporate it into the design. Farmers are encouraged to work with the Developer to incorporate utilities such as a well for irrigation, as needed. Hiring a land-use attorney to look out for the Farmer/Landowner's interests is encouraged. Should additional questions arise as discussions continue, project teams may contact dual-use@njcleanenergy.com.

Critical Questions:

What is our financial arrangement? Am I agreeing to sign a lease to farm the land, receive compensation as a contractor, or both? What is the proposed long-term relationship between myself, the Farmer, and you, the Developer?

How many years is this commitment to farm the site and how many years are you, the Developer, committed to support farming this site?

How much time do I need to commit to assisting with the design, installation, and operation of the solar array (e.g., design meetings, provide information for the Pilot Program application, participate in permitting and approval meetings, assist with the crop/animal research)? Am I being compensated for this time? *Please note that a Farmer/Landowner is required to be part of the project team and should be included during all stages of the process for an agrivoltaics project to be successful in the Pilot Program.*

The first three (3) years of the development in the Pilot Program requires a research component. Am I being compensated for this aspect of the project, and does the financial arrangement change after this three-year research period?

Who are the primary contact(s) for the solar development?

What are the communication and operating procedures related to:

- site access
- requesting work stoppage to address construction concerns
- panel tilt angle adjustment for farming equipment access (in the case of single-axis trackers)
- Solar equipment failure or damage, and/or
- communications with (sub)contractors?

What type of solar system (i.e., fixed tilt, single-axis trackers, vertical bifacial or other) will be installed? Can a site visit be arranged to view an installation that is similar to the proposed design?

Does the proposed site and solar system design include sufficient accommodations and flexibility to allow different farming practices (requiring various farming equipment) to be easily implemented in the future (e.g., switching from hay production to staple crops or vegetables)? *See the "Design of Solar Array" section below for additional questions regarding the design.*

Can the site be farmed immediately prior to and during system installation? Should cover crops be planted prior to installation of equipment? If cover crops should be planted after installation, how soon can this be done?

What precautionary measures will be taken to prevent soil compaction during installation? Are you, the Developer, planning to do any site remediation after construction?

Financial:

How is farmer compensation and/or land lease rate for the Farmer determined?

What factors go into determining farmer compensation (e.g. expenses due to non-agricultural vegetation management, risks of agricultural investment, extra time need to farm with a solar array, for the purchase of special farm equipment needed to farm within the solar array, etc.)?

Will I, the Farmer or Landowner, benefit in any way from the electricity produced at the agrivoltaics site?

Will I, the Farmer, be compensated for any crop/yield losses due to the solar array, for example if there is a 20% yield loss can be documented in the array area compared to the yield obtained from the control area? If so, how will the amount of compensation be determined?

Will I, the Farmer, be compensated for any future crop damage caused by maintenance and repairs of the solar array? If so, how will the amount of compensation be determined? Can the maintenance of the solar array be coordinated for a time when there is no crop planted?

Am I, the Farmer, required to get additional liability or other insurance for farming on the agrivoltaics site?

Is an agrivoltaics site eligible for crop insurance?

Am I, the Farmer, able to 'walk away' from an approved project without legal and/or financial repercussions?

Am I, the Farmer, responsible for creating a succession plan to ensure the land remains under agricultural production for the duration of the project, or longer, if I leave the project?

How could the agrivoltaics production system be economically viable in the future when public incentives for dual-use are no longer available, especially with changing and uncertain agricultural markets? *Consider discussing the markets for which the Farmer will produce and how it can be sustainable for the next 10 to 25 years.*

Site Access and Communications:

Where will site access be located and what will it look like (i.e. how wide is the road and gate)?

What materials (if any) will be used to create the access road?

Agricultural Plan

Will the proposed site be augmented to accommodate for planned or possible agricultural production, such as installing a well for irrigation or drinking water for livestock?

Where will the lay-down area (material and equipment storage prior and during construction) be located? How large will it be? How will this area be restored after construction?

Prior, during, and after system installation, can I, the Farmer, (and my crew) access the site without requiring permission from you, the Developer, or the operations and management team? After installation, what protocols if any will I, the Farmer, need to follow in order to conduct farming operations?

What are the plans for decommissioning the solar array at the end of its useful life? At that time, who is responsible for decommissioning the solar array and returning the site to its original conditions (i.e., removal of the infrastructure and all electrical components)?

Have you, the Developer, thoroughly evaluated the cropping/agricultural plan presented by me, the Farmer? Do I, the Farmer, have sufficient experience for this agricultural/horticultural production system? How does this plan consider soil health, especially considering the site's history and potential impacts of solar installation?

In what ways do you, the Developer, envision solar production to be synergistic with agricultural production?

Design of Solar Array:

How much room will be available around and underneath the solar panels for farming operations? How many feet or yards will the proposed row spacing provide for movement of farming equipment and animals?

At what location will the inverter, transformer, and electric meter be installed?

How will the generated electricity be delivered to the local electricity grid?

How deep will the solar array posts be driven into the ground?

Does the proposed design require a different farming direction (e.g., from N to S instead of from E to W)? If so, does that impact erosion control measures such as planting along contour lines?

How does the proposed design deal with the local topography? Does the design require any soil relocation?

Does the proposed design take into account any shadow patterns created by tree lines surrounding the solar array area and the control area?

Does the proposed design consider farming practices (i.e., are the panel rows aligned with the orientation of the field, or is the row orientation strictly optimized for maximum power production: South facing for fixed tilt systems, and North – South rows for tracking systems)? If the latter, can the design be changed such that the panel rows better align with the orientation of the field?

If differently sized farming equipment is needed to accommodate farming in the solar array, can that equipment be acquired through incentives from the Pilot Program?

How does the proposed design make sure that larger animals are not able to damage the solar array by, for example, rubbing against the solar panels or chewing on electrical wiring? How does it ensure that they are not harmed by the solar array by strangling on wires or otherwise encountering dangers from the system (i.e. electrocution)?

What is the proposed installation depth of any underground wiring in and around the solar array?

Are there any restrictions on the height of the proposed crop(s) because the height of the crop would interfere with the operation of a tracker system, the crop height would result in shadows on the solar panels, for other reasons?

Does the proposed design ensure that any electrical component of the array system – e.g., placement of ground-mounted combiner boxes, overhead conduit baskets and drive shafts - does not interfere with farming operation nor cause any safety issues?

Does the proposed design require the removal of tree/brush lines/windbreak and/or drainage ditches? If so, what will be the impact of this work on soil quality and plant health?

What is the proposed design and construction plan for the required deer fencing?

Can the proposed solar system design accommodate additional features that would improve farming?

Installation:

What is the expected timeframe for installation?

What precautionary measures will be taken to prevent soil compaction during installation?

How will soil compaction be minimized? Will any specific measures such as the use of tracked vehicles be used? Will soil compaction be minimized by requiring the system installers to keep wheeled construction vehicles (e.g., pick-up trucks, box trucks, service vehicles) parked along the agrivoltaics site and not on the land that will be used for farming after the construction is completed?

Does the installation process accommodate the seasonal nature of farming (e.g., delay the start of construction until after the final harvest of the growing season, and/or allow for a new crop to start at the typical beginning of the growing season)?

Will the system installer postpone installation after a heavy rain and resume installation only after the soil has sufficiently dried so it can support heavy (tracked) equipment?

When trenching is needed to install underground wiring, will the contractor make sure that the removed topsoil will be placed back on top when the trench is filled? How will this be ensured?

Are you, the Developer, planning to do any site remediation after construction? If so, what kind of remediation is planned?

Will I, the Farmer, be able to request work stoppage and a resolution meeting during system installation if I become concerned that construction practices will negatively impact soil conditions?

Operation:

If the design consists of a solar tracking system, can I, the Farmer, temporarily change the tilt angle of the panels so as to make driving farming equipment between the rows easier? When and for how long would this be allowed?

If the design consists of a solar tracking system, can I, the Farmer, request a counter tracking strategy during specific crop stages (e.g., allowing more light to reach the crop during germination and early plant establishment)?

Am I, the Farmer, responsible for weed management between and around the posts that support the solar array, as well as along and outside the fencing? If not, what kind of weed management will be used?

What procedures will be used when a piece of farming equipment inadvertently hits the solar array?

Will there be any restrictions on applying agricultural chemicals (e.g., pesticides, herbicides, fungicides, spray adjuvants or spreader-sticker compounds) at the project site?

Can an overhead irrigation system such as a water gun, solid set sprinklers or travelling irrigation boom be used in the solar array area?

How often will researchers access the agrivoltaics site and will I, the Farmer, be informed ahead of time when they plan to visit the site?