Rutgers Agrivoltaics Program Information Sheet 2025-04

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Questions farmers and landowners should ask solar developers when considering an agrivoltaic installation

This information sheet includes a series of questions farmers and landowners are encouraged to ask a solar developer when they discuss a proposed installation of an agrivoltaic system on the land they own or farm. The parties involved in these discussions have different interests, expertise, and expectations and these differences are not always fully appreciated or communicated. In order to prevent misunderstandings and conflicts down the road, it is a good idea to fully discuss what an agrivoltaic project entails, how it will be installed and operated, and what impacts it may have on the agricultural or horticultural practices that will be implemented on the site. The questions included in this information sheet are not exhaustive, but are meant to be a starting point for detailed discussions. Since farming practices differ from farm-to-farm and these practices may change over time depending on crop rotations or new farming opportunities, it is important that discussions involving farmers, landowners, and solar developers include a detailed assessment of farm-specific opportunities and constraints. Note that none of the questions listed below are in a specific order.

General Questions:

- Who at the solar developer/operator will be the primary contact for the farmer and landowner?
- Where will site access be located, and what will it look like?
- What materials (if any) will be used to create the access road?
- What location and size will be used for the lay-down area (material and equipment storage prior and during construction)?
- Prior, during, and after system installation, can the farmer (and their crew) and the landowner access the site without requiring permission from the solar developer/operator?
- After installation, what (if any) protocols will the farmer need to follow in order to conduct farming operations?
- How much time does the farmer need to commit to assisting with the design, installation, and operation of the solar array?
- What are the plans for decommissioning the solar array at the end of its useful life (typically after 20-25 years)? At that time, who is responsible for decommissioning the solar array and returning the site to its original condition (i.e., removal of the infrastructure and all electrical components)?
- A farmer can own the land to be used for the agrivoltaic project, or a farmer can rent/lease that land from a landowner. In either case, what is the proposed long-term relationship among the farmer, landowner, and the solar developer/operator?
- Can a farmer who leases the land ‘walk away’ from an agrivoltaics project without legal and/or financial repercussions?

Questions about the Design:

- What type of solar system (i.e., fixed tilt, single-axis trackers, or vertical bifacial) will be installed?
- How much room will be available around and underneath the solar panels for farming operations?
- Can a local site visit be arranged to take a look at an installation that is similar to the proposed design?
- At what location will the inverter and electric meter (balance of system) 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?
- Is the proposed design optimized for farming practices (i.e., are the panel rows aligned with the orientation of the field, or is the row orientation strictly optimized for maximum energy 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?
- Does the proposed row spacing provide enough room for easy movement of farming equipment?
- If differently sized farming equipment is needed to accommodate farming in the solar array, can that equipment be paid for by the solar developer?
- Does the proposed design include sufficient space for easy turnaround at the end of the panel rows?
- If applicable, how does the proposed design make sure that animals are not able to damage the solar array (e.g., by rubbing against the solar panels, or by chewing on electrical wiring)?
- What is the proposed depth of any underground wiring in and around the solar array?
- Are there any restrictions on the height of the proposed crop(s) (e.g., because the height of the crop would interfere with the operation of a tracker system, or would the crop height result in shadows on the solar panels)?
- Does the proposed design make sure that any electrical component of the array system does not interfere with farming operation (e.g., ground-mounted combiner boxes, overhead conduit baskets and drive shafts), nor cause any safety issues?
- Does the proposed design require the removal of tree/brush lines and/or drainage ditches? If so, what will be the impact of this work on soil quality and performance?
- Will a deer fence be installed around the site? If so, who will pay for it?
- Can the proposed system design include additional features that would improve farming (e.g., the installation of a well for crop irrigation or animal drinking)? If so, who will pay for it?
- Does the proposed design include sufficient flexibility so that different farming practices can be easily implemented in the future (e.g., switching from hay production to staple crops or vegetables)?

Questions about the Installation:

- What is the expected timeframe for installation?
- Can the site be farmed immediately prior to and during system installation? Are cover crops allowed prior to and during installation?
- What precautionary measures will be taken to prevent soil compaction during installation?
- Will the system installers only use tracked vehicles during construction so as to minimize soil compaction?
- Will the system installers be required to keep wheeled construction vehicles (e.g., pick-up trucks, box trucks, service vehicles) parked along the agrivoltaic site and not on the land that will be used for farming after the construction is completed (this requirement will reduce soil compaction)?
- Does the installation process accommodate for 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 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?
- Is the solar developer planning to do any site remediation after construction? If so, what kind of

remediation is planned?
- Will the farmer be able to request work stoppage and a resolution meeting during system installation if the farmer is concerned that construction practices will negatively impact soil conditions?

Questions about the Operation:

- If the design consists of a solar tracking system, can the farmer temporarily change the tilt angle of the panels so as to make driving farming equipment between the rows easier?
- If the design consists of a solar tracking system, can 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)?
- Is the farmer responsible for weed management between and around the posts that support the solar array? 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) on the crop(s)?
- Can an overhead irrigation system (e.g., a water gun) be used in the solar array area?
- After installation, how often will third parties need to access the agrivoltaic site, and will the farmer be informed ahead of time when they plan to visit the site?

Financial Questions:

- Will the farmer receive any additional compensation (including reduced land rental/lease fees) for farming at an agrivoltaic site?
- Will the farmer benefit in any way from the electricity produced at the agrivoltaic site?
- Will the farmer be compensated for any crop/yield losses due to the solar array? If so, how will the amount of compensation be determined?
- Will 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?
- Is the farmer required to get additional (liability) insurance for farming on the agrivoltaic site?
- Is an agrivoltaic site eligible for crop insurance?

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Additional agrivoltaics information can be found at: https://agrivoltaics.rutgers.edu