

New Jersey Administrative Code – Right to Farm and Solar Energy

§ 2:76-2A.12

Current as of June 29, 2021

§ 2:76-2A.12 Agricultural management practice for the construction, installation, operation or maintenance of solar energy generation facilities, structures and equipment on commercial farms

(a) As used in this section, the following words and terms shall have the following meanings, unless the context clearly indicates otherwise:

"Ambient sound level" means that measured value, which represents the summation of the sound from all of the discrete sources affecting a given site at a given time.

"Board" means the county agriculture development board established pursuant to N.J.S.A. 4:1C-14 or a subregional agriculture retention board established pursuant to N.J.S.A. 4:1C-17.

"Commercial farm" means:

1. A farm management unit of no less than five acres producing agricultural or horticultural products worth \$ 2,500 or more annually, and satisfying the eligibility criteria for differential property taxation pursuant to the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.; or
2. A farm management unit less than five acres, producing agricultural or horticultural products worth \$ 50,000 or more annually and otherwise satisfying the eligibility criteria for differential property taxation pursuant to the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.

"Committee" means the State Agriculture Development Committee (SADC) established pursuant to N.J.S.A. 4:1C-4.

"Conservation plan" means a site-specific plan that prescribes land treatment and related conservation and natural resources management measures that are deemed to be necessary, practical and reasonable for the conservation, protection and development of natural resources, the maintenance and enhancement of agricultural or horticultural productivity, and the control and prevention of non-point source pollution.

"dBA" means the sound level as measured using the "A" weighting network with a sound level meter.

"dBZ" means the sound level as measured using the "Z" weighting network with an octave band sound level meter.

"Decibel" means the practical unit of measurement for sound pressure level as defined in N.J.A.C. 7:29.

"Geotextile fabrics" means permeable, woven and non-woven fabrics that allow for water infiltration into the underlying soil.

"L90" means the sound level exceeded for 90 percent of the duration of a measurement period.

"Lmin" means the minimum sound level measured during a measurement period.

"New Jersey Field Office Technical Guide (NJ-FOTG)" means the USDA-NRCS technical reference, which is incorporated herein by reference, as amended and supplemented, customized for the State of New Jersey, prescribing practices and standards for the conservation and management of soil, water and related natural resources, which is available at http://efotg.nrcs.usda.gov/efotg_locator.aspx?map=NJ.

"Occupied area" means the total contiguous or noncontiguous area(s) supporting the solar energy generation facilities and related infrastructure. The total area calculation shall include land devoted to the solar energy generation facilities; nonfarm roadways; roadway or utility easements accessing the solar

generation facilities; any areas of the farm used for underground piping or wiring to transmit solar energy or heat where the piping or wiring is less than three feet from the surface; and any other buildings or site amenities deemed necessary for the production of solar energy on the farm.

"Octave band sound level meter" means an instrument that conforms to ANSI S1.4-1983 or its successors and ANSI S1.11-1986 or its successors.

"Operator" means the person or entity that installs, owns or controls the solar energy generation facilities, structures and equipment.

"Owner" means the owner of record of the commercial farm.

"Prime farmlands" means lands so defined by the USDA Natural Resources Conservation Service.

"Setback" means the distance measured from the nearest vertical component within the occupied area, including, but not limited to, solar arrays, inverters and fencing.

"Site plan" means a plot plan that includes the following:

1. Property lines and physical dimensions of the commercial farm;
2. Location, configuration and size of the occupied area measured in square feet and acres;
3. Method of mounting, system height and generating capacity (in alternating current) of the solar energy generation facilities;
4. Computed distances for setbacks and screening where required;
5. Proposed new roadways and existing roadways to access the facilities;
6. Use of concrete, asphalt, gravel, geotextile fabrics and the nature and extent of any site disturbances within the occupied area;
7. A copy of the USDA, Natural Resources Conservation Service soil map that uses the most current Soil Survey Geographic (SSURGO) database with a summary of the soil mapping units and designation of prime farmlands for the entire property;
8. A copy of the conservation plan that was approved by the soil conservation district, which is referenced in this section;
9. A copy of the farmland assessment form approved by the local tax assessor for the commercial farm; and
10. A copy of the analysis demonstrating that the solar energy generation system has been designed to comply with the sound standards in (j) below.

"Solar energy" means electricity or heat that is generated through a system that employs solar radiation.

"Solar energy generation facilities" means all the components of a solar energy generation system, including, but not limited to, structures and equipment, photovoltaic panels and films, arrays, collectors, piping, footings, supports, mounting and stabilization devices, inverters, pumps, transformers, electrical distribution and transmission wires, utility poles and other on-farm infrastructure necessary to operate and maintain the system for the generation of power or heat.

"Sound level meter" means an instrument that conforms to ANSI S1.4-1983 or its successors.

"System height" means the highest point of any component of the solar energy generation facilities, structures and equipment at any point in time, as measured from the ground beneath that point.

"Vegetative screen" means the planting of deciduous and non-deciduous trees, shrubs, grasses and other vegetation to serve as a visual screen to obstruct the view of the solar energy generation facilities.

(b) The owner or operator of a commercial farm who is engaged in the construction, installation, operation or maintenance of a solar energy generation facility for purposes of generating solar energy, and is seeking the benefits and protections of the Right to Farm Act, shall comply with the provisions of this section and relevant or applicable State and Federal rules and regulations including, but not limited to, the following:

1. The Right to Farm Act, N.J.S.A. 4:1C-9;
2. The Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.1 et seq.;
3. The Pinelands Protection Act, N.J.S.A. 13:18A-1 et seq., and the standards of P.L. 1979, c. 111, and the Comprehensive Management Plan for the Pinelands Area adopted pursuant to P.L. 1979, c. 111 for any lands located in the Pinelands Area;
4. The Coastal Area Facilities Review Act, N.J.S.A. 13:19-1 et seq., and the New Jersey Department of Environmental Protection Coastal Zone Management rules at N.J.A.C. 7:7E;
5. The Highlands Water Protection and Planning Act, N.J.S.A. 13:20-1 et seq.;
6. The Freshwater Wetlands Protection Act, N.J.S.A. 13:9B-1 et seq.; and
7. The State Uniform Construction Code, N.J.A.C. 5:23.

(c) The interconnection of the solar energy generation facilities to the electrical transmission or distribution system is subject to any applicable requirements of the Federal or State government.

(d) An owner or operator of a commercial farm who is seeking right-to-farm protection for the construction, installation, operation or maintenance of a solar energy generation facility shall provide a site plan to the board or committee upon request.

(e) Solar energy generation facilities shall not be constructed or installed on prime farmlands to the maximum extent physically and financially practicable.

(f) The mounting of solar photovoltaic panels, collectors or films constructed, installed and operated on the farm shall be done in the following manner:

1. To minimize adverse impacts on the productivity of the soil, the preferred installation shall be as follows:
 - i. On buildings or facilities;
 - ii. On the ground by a screw, piling or similar system that does not require a concrete footing or other permanent mounting; or
 - iii. Where the occupied area does not exceed one acre on the ground using gravel within contained structures, concrete block or similar materials for the purpose of providing ballast for mounting the solar energy generation facilities; or
2. In the event that the method in (f)1 above, of mounting the solar photovoltaic panels, collectors or films, are not practicable, then written justification shall be provided by a licensed professional engineer responsible for designing the installation of the solar photovoltaic panels, collectors or films that a permanent ground mounting is necessary to conform with Federal or State laws, rules or regulations and that the permanent mounting requires footings, concrete or other permanent methods.

(g) Ground-mounted solar energy generation facilities shall be constructed in compliance with the following system height, setback and screening standards:

1.

| Mounting | System Height | Size Of Occupied Area | Minimum Setback To an Adjacent Residence Existing at the Time of System Installation and Not Located on the Commercial Farm | Minimum Setback To Property Line or Public Roadway Right of Way | Required Screening |
|----------|-------------------------------------|--------------------------------------|---|---|--------------------|
| Ground | Up to two feet | Up to one acre | 200 feet | 100 feet | Not Required |
| Ground | Greater than two feet up to 10 feet | Up to one acre | 300 feet | 150 feet | Not Required |
| Ground | Up to 10 feet | Greater than one acre up to 10 acres | 300 feet | 150 feet | Required |
| | | | 400 feet | 300 feet | Not required |
| Ground | Greater than 10 feet up to 20 feet | Up to 10 acres | 300 feet | 300 feet | Required |
| | | | 500 feet | 400 feet | Not required |

2. Solar energy generation facilities shall not exceed a maximum system height of 20 feet.

3. Solar energy generation facilities shall be located in a manner that minimizes views of the facilities from public roadways and existing residences not located on the commercial farm, by utilizing existing visual barriers including, but not limited to, buildings, trees, hedgerows and pre-existing natural topography to the maximum extent possible.

i. In the event that existing visual barriers do not fully obstruct the view of the solar energy generation facilities, the installation of vegetative screens is required in certain circumstances as identified in paragraph (g)1 above.

ii. The installation of required vegetative screens shall comply with the aesthetic standards of the conservation plan approved by the soil conservation district and implemented by the owner pursuant to N.J.S.A. 54:4-23.3c.

(1) The conservation plan approved by the soil conservation district must address the soil and water resource concerns outlined in the National and State Resources Concerns and Quality Criteria (Section III) and Practice Standards (Section IV) of the Natural Resources Conservation Service NJ-Field Office Technical Guide (NJ-FOTG). The conservation plan filed must include a completed and NRCS-approved CPA-52 Environmental Evaluation Worksheet.

iii. The aesthetic standards of the conservation plan shall address the following:

(1) The use of existing visual barriers, where practicable;

(2) The need for and location of vegetative screens, including the identification of appropriate species and varieties of vegetation, to ensure that there is adequate visual screening throughout the year; and

(3) The appropriate height or caliper of the vegetation to be planted to ensure that there is a 75 percent screening of the solar energy generation facilities from existing residences on adjacent properties and public roadways within five years of completing the installation of the facilities.

(h) The solar energy generation facilities shall be constructed to avoid solar reflection on adjoining properties and public roadways.

(i) The treatment of the land for purposes of constructing, installing, operating or maintaining the solar energy generation facilities within the occupied area shall be in accordance with the following standards:

1. The use of existing roadways to provide access to the solar energy generation facilities shall be maximized to avoid the construction of new onsite roadways to the extent practicable.

- i. New roadways within the occupied area shall be designed as grassed roadways to minimize the extent of soil disturbance, water runoff and soil compaction.
- ii. The use of geotextile fabrics and gravel placed on the surface of the existing soil for the construction of temporary roadways during the construction of the solar energy generation facilities is permitted provided that the geotextile fabrics and gravel are removed once the solar energy generation facilities are in operation;

2. The use of geotextile fabrics covered by a layer of gravel is permitted as a base for the installation of solar energy generation facilities provided that the system height is no greater than two feet and the occupied area does not exceed one acre;

3. The use of concrete or asphalt is prohibited within the occupied area, except as follows:

- i. The mounting of inverters, transformers, power conditioning units, control boxes, pumps and other such system components;
- ii. The mounting of solar photovoltaic panels, films and arrays when used as ballast, as described in paragraph (f)1 above; and
- iii. The mounting of the solar photovoltaic panels, films and arrays, if determined necessary by a licensed professional engineer as described in paragraph (f)2 above;

4. Site disturbance including, but not limited to, grading, soil removal, excavation and soil compaction is limited to no more than one acre within the occupied area to ensure that the area can readily be returned to active agricultural or horticultural production after the removal of the solar energy generation facilities;

5. During construction and installation of the solar energy generation facilities, appropriate measures are taken to control soil erosion from wind and water including, but not limited to, the following:

- i. The temporary stabilization of exposed areas using vegetative cover or mulch; and
- ii. The application of non-potable water to exposed areas and the utilization of barriers to control air current and minimize soil blowing;

6. During operation and maintenance of solar energy generation facilities, appropriate measures are taken to address soil and water resource concerns in accordance with the conservation plan;

7. The use of geotextile fabrics is permitted only for the purpose of conducting agricultural or horticultural production within the occupied area, unless otherwise permitted in this section; and

8. Where it is not practicable to utilize the occupied area for agricultural or horticultural production in accordance with N.J.S.A. 54:4-23.1 et seq., the occupied area shall be maintained in a vegetative cover to prevent soil erosion, mowed on a regular basis and managed to prevent weeds or other invasive species from growing or spreading to other areas of the commercial farm or surrounding properties.

(j) Solar energy generation facilities shall be designed to comply with either of the following standards for sound emission:

1. The sound level shall not exceed 40 dBA when measured at any point on the property line of the commercial farm; or
2. The sound level shall not exceed the ambient sound levels measured at locations at the property line of the commercial farm that reasonably represent current or potential off-site sensitive receptors in accordance with the following requirements:

i. Ambient sound level measurements shall be made with an octave band sound level meter during daylight hours for periods of at least one half hour and on three separate occasions, a minimum of four hours apart, representing morning, mid-day and evening, at least one of which should be during a non-rush hour. The meter shall be set for slow response with a one second sampling interval; and

ii. The data reported for each occasion shall be the octave band values (31.5 Hz to 8,000 Hz) from the one second sample that represents the L90 or Lmin broadband value ("unweighted" or "flat" response, for example, dBZ).

(k) All inverters, transformers, power conditioning units and other system components that are designed to convert or modify electric current, or transmit electricity to the transmission or distribution system, shall be secured and entirely contained within a structure, building or steel cabinet secured with an operating lock.

(l) There shall be no signs that are visible from any public road posted on the energy generation facilities, equipment and structures, except for the manufacturer's or installer's identification, appropriate warning signs or owner identification.

(m) The solar energy generation facilities shall be deemed abandoned and the facilities shall be decommissioned in those instances when they are no longer being utilized to produce solar energy for a period of 18 consecutive months.

1. The decommissioning of all solar energy generation facilities shall be subject to local ordinances.

2. The decommissioning of all solar energy generation facilities shall be done in accordance with a conservation plan designed to address the impacts of the decommissioning process.

i. The conservation plan approved by the soil conservation district shall require, at a minimum, that all solar energy generation facilities shall be removed from the commercial farm and that the land shall be restored in accordance with the conservation plan prepared pursuant to NJ-FOTG in order to achieve as much agricultural productivity of the soil as practicable.

History: New Rule, R.2011 d.222, effective August 15, 2011. See: 43 N.J.R. 231(a), 43 N.J.R. 2157(a).