

RULE PROPOSALS

INTERESTED PERSONS

Interested persons may submit comments, information or arguments concerning any of the rule proposals in this issue until the date indicated in the proposal. Submissions and any inquiries about submissions should be addressed to the agency officer specified for a particular proposal.

The required minimum period for comment concerning a proposal is 30 days. A proposing agency may extend the 30-day comment period to accommodate public hearings or to elicit greater public response to a proposed new rule or amendment. Most notices of proposal include a 60-day comment period, in order to qualify the notice for an exception to the rulemaking calendar requirements of N.J.S.A. 52:14B-3. An extended comment deadline will be noted in the heading of a proposal or appear in subsequent notice in the Register.

At the close of the period for comments, the proposing agency may thereafter adopt a proposal, without change, or with changes not in violation of the rulemaking procedures at N.J.A.C. 1:30-6.3. The adoption becomes effective upon publication in the Register of a notice of adoption, unless otherwise indicated in the adoption notice. Promulgation in the New Jersey Register establishes a new or amended rule as an official part of the New Jersey Administrative Code.

AGRICULTURE

(a)

STATE AGRICULTURE DEVELOPMENT COMMITTEE

State Agriculture Development Committee Rules Agricultural Management Practice for the Construction, Installation, Operation or Maintenance of Solar Energy Generation Facilities, Structures and Equipment on Commercial Farms

Proposed New Rule: N.J.A.C. 2:76-2A.12

Authorized By: State Agriculture Development Committee, Susan E. Craft, Executive Director.

Authority: N.J.S.A. 4:1C-9.2a.(1).

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

Proposal Number: PRN 2011-031.

Submit comments by April 8, 2011 to:

Susan E. Craft, Executive Director
State Agriculture Development Committee
PO Box 330
Trenton, NJ 08625-0330

The agency proposal follows:

Summary

The State Agriculture Development Committee (SADC) proposes new N.J.A.C. 2:76-2A.12 to implement legislation that extends the protections of the Right to Farm Act, N.J.S.A. 4:1C-1 et seq. (the Act), to the generation of solar energy on commercial farms within certain limits. N.J.S.A. 4:1C-9i., 9.2a.(1) and 32.4 (the legislation).

The Act provides an owner or operator of a commercial farm with protection against unduly restrictive municipal or county ordinances, regulations or resolutions. It establishes an irrebuttable presumption that no commercial agricultural operation, activity or structure constitutes a public or private nuisance, nor is any such operation, activity or structure deemed to otherwise invade or interfere with the use and enjoyment of any other land or property, if it conforms to agricultural management practices (AMPs) recommended by the SADC and adopted pursuant to the provisions of the Administrative Procedure Act, or whose specific operation or practice has been determined by a county agriculture development board (CADB) or, where appropriate, the SADC, to constitute a generally accepted agricultural management operation or practice. The operation of the commercial farm must also be consistent with all relevant Federal or State statutes or rules, and must not pose a direct threat to public health and safety.

Prior to enactment of the legislation, the SADC considered the generation of solar energy on commercial farms as a generally accepted practice provided that the solar energy system was designed to generate energy solely to meet the farm's energy needs. As set forth in N.J.S.A. 4:1C-32.4, farms may generate more solar energy than the commercial farm's need and be eligible for right-to-farm protection for that activity if the energy generation is consistent with the limits set forth in the law and with rules adopted by the SADC. The SADC has coordinated with the New Jersey Department of Agriculture, Board of Public Utilities, Department of the Treasury's Division of Taxation and the Department of Environmental Protection in the development of this proposed new rule.

The proposed new rule defines certain words and terms used in this section. Commercial farm operations seeking right-to-farm protection must comply with the requirement of the proposed new rule. They also must satisfy the law's qualifying criteria for farmland assessment for land in solar energy generation. These include that the amount of acreage devoted to solar energy generation facilities, structures and equipment does not exceed a ratio of one to five acres, or portion thereof, of land devoted to energy generation and land devoted to agricultural or horticultural operations; that solar energy generation facilities, structures and equipment may not be constructed or installed on more than 10 acres of the farmland for which the owner of the property is applying for assessment pursuant to N.J.S.A. 54:4-23.1 et seq. and, if power is being generated, no more than two megawatts of power are generated on the 10 acres or less. A megawatt is 1,000 kilowatts and a kilowatt is 1,000 watts. The SADC is not responsible for determining if a commercial farm meets the qualifying requirements for farmland assessment. The local tax assessor retains that responsibility pursuant to N.J.S.A. 54:4-23.1 et seq. Conformance is also required with other relevant State and Federal rules and regulations, where applicable.

The legislation directed the SADC to develop rules for the implementation of the law. The proposed new rule establishes an AMP, or standards, which commercial farms must meet to be eligible for right-to-farm protection for the on-farm generation of solar energy. It states that interconnection of solar energy generation facilities to the electrical transmission or distribution system is subject to any applicable Federal or State requirements. It requires that any commercial farm operation seeking right-to-farm protection for solar energy generation provide a site plan to the CADB or SADC upon request, and describes required components of the site plan including a conservation plan approved by the soil conservation district. The proposed new rule defines the term "occupied area" to clarify that the land devoted to solar energy generation facilities means the total contiguous or noncontiguous area(s) supporting the solar facilities and related infrastructure, and describes what is included in related infrastructure.

The SADC's proposed new rule seeks to ensure that farmland used for solar energy generation facilities that are eligible for right-to-farm protection can readily be returned to active agricultural or horticultural production after the removal of the facilities. Therefore, the AMP

includes several requirements that address use and treatment of the land in the construction, installation, operation or maintenance of solar energy facilities. It requires that solar energy generation facilities not be installed on prime farmlands to the maximum extent physically and financially practicable. It sets forth the preferred methods of mounting solar energy equipment that use systems not requiring a permanent mounting. However, in the event the preferred mounting methods are not practicable, a permanent mounting system may be used if a licensed professional engineer responsible for designing the solar energy installation provides written justification that permanent mounting is necessary to conform with State or Federal laws or rules.

The proposed new rule limits site disturbance including, but not limited to, grading, soil removal, excavation and soil compaction, to no more than one acre within the occupied area, and describes appropriate measures to address soil and water resource concerns during construction, installation, operation and maintenance. It requires that use of existing roadways be maximized as much as possible, and that roadways be designed as grassed roadways to minimize the extent of soil disturbance, water runoff and soil compaction. The use of gravel, concrete and asphalt is only permitted in limited circumstances in order to protect soil quality and the ability to return the land to agricultural or horticultural production. The use of geotextile fabrics is permitted within the occupied area only for the purpose of conducting agricultural or horticultural production, unless otherwise expressly permitted in the AMP. Geotextile fabrics and gravel may be placed on the surface of the existing soil for the construction of temporary roadways during the construction of the solar energy facilities provided that they are removed once the facilities are in operation. The use of geotextile fabrics covered by a layer of gravel is permitted as a base for installing solar energy generation facilities where the system height is two feet or less and the occupied area is one acre or less. Concrete or asphalt is permitted for mounting certain system components; for providing ballast where the occupied area is one acre or less; or in the event a licensed professional engineer responsible for designing the solar energy generation system installation provides written justification that a permanent ground mounting – including footings, concrete or other permanent methods – is necessary to conform with Federal or State laws, rules or regulations. It also requires that the occupied area be maintained in a vegetative cover and mowed on a regular basis in the event that the area cannot be used for agricultural or horticultural production.

The proposed new rule includes requirements to prevent solar energy generation facilities from posing a noise or aesthetic nuisance to neighbors and the general public. It requires that solar energy generation facilities be designed to result in a noise standard that limits sound from the facilities to no more than 40 decibels at the property line, or an alternative measurement standard. The AMP requires that solar energy generation facilities be located in a way that uses existing visual barriers, such as buildings, trees and hedgerows, to minimize views of the facilities from public roadways and existing residences to the maximum extent possible. The AMP establishes minimum requirements for setback and vegetative screening of the solar energy facilities – based on the height of the system and size of the occupied area – to minimize views of the facilities from adjacent existing residences, property lines and roadways. Where vegetative screening is required, it must be installed in conformance with the aesthetic standards in the conservation plan approved by the soil conservation district. The AMP requires that the vegetation's height and caliper must achieve 75 percent screening of the solar energy generation facilities from existing residences on adjacent properties and public roadways within five years of installation of the facilities. This AMP does not provide right-to-farm protection to solar energy generation facilities that are greater than 20 feet in height as measured from the highest point of any component of the solar energy generation facilities, structures and equipment, at any point in time, to the ground. The AMP limits the type of signage that can be placed on the energy generation facilities when visible from a public road.

The proposed new rule requires that solar energy generation facilities be constructed to avoid solar reflection on adjoining properties and public roadways. To protect public safety, it requires that certain electrical components of the energy generation system be safely secured and contained within a structure, building or locked steel cabinet.

The proposed new rule states that solar energy generation facilities will be deemed abandoned, and shall be decommissioned, when they are no longer being used to produce solar energy for 18 consecutive months. It requires that decommissioning be subject to local ordinances and be conducted in accordance with a conservation plan designed to address the impacts of the decommissioning process.

As the SADC has provided a 60-day comment period for this notice of proposal, therefore, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

Social Impact

The proposed new rule will have a positive social impact by implementing legislation that was designed to encourage the use of renewable energy on commercial farms. Commercial farm operations that comply with the proposed new rule will enjoy protection from overly restrictive municipal or county ordinances, regulations or resolutions that may unduly restrict the generation of solar energy, thus encouraging farmers to pursue solar energy projects. The proposed new rule will advance New Jersey's clean energy agenda and benefit the public by reducing the need for traditionally generated electricity and the burning of oil, coal or natural gas, resulting in the elimination of pollution that would have been caused by such electric generation or natural resource usage.

The SADC expects that farmers will be supportive of the proposed new rule's right-to-farm protection for on-farm generation of solar energy and the establishment of clear standards providing greater predictability for right-to-farm eligibility. Some farmers may object to certain conditions in the proposed new rule that may be more stringent than those required by local ordinances. Because solar energy technology is relatively new, many municipalities do not have ordinances that address it and others are just now working to develop such ordinances. The SADC has developed and proposed the AMP with the understanding that it will be implemented Statewide and must be sufficiently comprehensive and protective to address a wide range of solar energy generation scenarios.

Some municipalities and members of the public may object to the proposed new rule on the ground that right-to-farm protection can preempt county resolutions and municipal ordinances. However, by proposing the new rule, the SADC is merely implementing the legislative mandate to extend right-to-farm protection to on-farm solar energy generation within certain limits.

Economic Impact

The proposed new rule will provide economic benefits to owners of commercial farms by protecting their ability to install solar energy generation facilities to offset the energy costs of their farm and to supplement farm income. This will help strengthen the viability of individual farms and New Jersey's agricultural industry.

The SADC expects the proposed new rule to have a positive economic effect on existing solar energy businesses in the State by helping to facilitate the installation of these systems on commercial farms. New Jersey is considered a national leader in renewable energy, and providing right-to-farm protection to on-farm solar energy generation will further the State's reputation for promoting renewable energy and help attract more of those types of businesses to New Jersey.

Federal Standards Statement

A Federal standards analysis is not required because the subject matter of the proposed new rule is not subject to any Federal requirements or standards.

Jobs Impact

The proposed new rule could generate some new jobs in solar energy businesses if there is a substantial increase in orders for solar energy equipment by commercial farm operations resulting from right-to-farm protection for solar energy generation. Additional jobs could be created if renewable energy businesses locate offices in New Jersey as a result of the State's support for solar and other types of renewable energy as demonstrated in part by this proposed new rule.

By helping to maintain the economic viability of farms and keeping New Jersey's agricultural industry strong, the proposed new rule also could help provide better opportunities for on-farm employment.

Agriculture Industry Impact

The proposed new rule will have a positive impact on the agricultural industry. It will afford commercial farm operators who conform with the solar energy AMP the protections of the Right to Farm Act. Adherence to the AMP will help ensure that, to the maximum extent possible, the land used for solar energy generation facilities can be returned to agricultural or horticultural production at some point in the future after the solar energy facilities have been removed, which will benefit the agricultural industry in the long term.

By providing right-to-farm protection, the proposed new rule will encourage commercial farm operators to install solar energy facilities that will help reduce farm energy costs and supplement farm income, thereby strengthening the viability of those farms and of New Jersey's agricultural industry.

Regulatory Flexibility Analysis

The majority of land potentially subject to the protection of the Right to Farm Act is owned by small businesses, as the term is defined in the Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., as they employ less than 100 employees full-time. Pursuant to N.J.S.A. 4:1C-9, if a commercial farm owner or operator voluntarily agrees to conform to adopted AMPs and is in compliance with all other eligibility requirements, the commercial farm owner or operator will be protected from private and public nuisance lawsuits and applicable county and municipal regulations.

The proposed on-farm solar energy generation AMP does not require the commercial farm operator to incur any costs for reporting or recordkeeping when complying with the recommended agricultural management practice. Commercial farm operators may incur some capital costs for landscaping, if vegetative screening is required; however, such costs are not anticipated to be onerous, and the proposed new rule provides for the screening requirement to be eliminated if the solar energy generation facilities are sufficiently set back from adjacent existing residences, property lines and roadways. Commercial farm operators may incur costs in contracting with noise measurement consultants to ensure that the solar energy generation facilities meet the noise standard set forth in the proposed new rule. The SADC anticipates that other aspects of ensuring conformance with the AMP will be incorporated in the design of the project and not require additional costs beyond those typically required for installation of solar energy facilities.

The SADC's proposed new rule establishes a performance standard for noise from the solar energy generation facilities, and provides commercial farm operators with the flexibility to determine how they will meet that standard, such as through system design, increased setbacks or installation of acoustical barriers.

The proposed new rule eliminates screening requirements for projects of one acre or less to provide some regulatory flexibility for smaller-scale solar energy projects that will have less of a visual impact. Further, there is no screening requirement for larger ground-mounted solar energy projects that are set back greater than the minimum required distance from adjacent existing residences, property lines or public roadways. Solar generation facilities that are constructed on rooftops of buildings and facilities are not subject to the setback or screening requirements identified in the proposed new rule.

Smart Growth Impact

The proposed new rule will further New Jersey's efforts to achieve smart growth and implement the State Development and Redevelopment Plan (State Plan). The State Plan designates a Rural Planning Area (Planning Area 4), which comprises much of the countryside of New Jersey where large masses of cultivated or open land surround rural regional, town, village and hamlet centers. The intentions of the State Plan in the Rural Planning Area include maintaining large contiguous areas of farmland and promoting a viable agricultural industry. Protecting commercial farm owners' ability to engage in solar energy generation will help them maintain viable agricultural operations, which will strengthen the agricultural industry in New Jersey and assist the State in its efforts to retain productive farmland.

Housing Affordability Impact

The proposed new rule will have an insignificant impact on affordable housing in New Jersey, and there is no evidence that the rule would evoke a change in the average costs associated with housing, because right-to-farm protection is being given to eligible commercial farms generating solar energy to support agricultural activities, not to support residential uses.

Smart Growth Development Impact

The proposed new rule will have an insignificant impact on smart growth development, and there is an extreme unlikelihood that it would evoke a change in housing production in Planning Areas 1 and 2, or within designated centers, under the State Development and Redevelopment Plan in New Jersey, because right-to-farm protection for solar energy generation on eligible commercial farms is unrelated to, and will not substantially impair, smart growth development within participating municipalities.

Full text of the proposed new rule follows:

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.

"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 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 (NRCS NJFOTG). 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 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 in order to achieve as much agricultural productivity of the soil as practicable.