

PINELANDS COMMISSION

Pinelands Comprehensive Management Plan

**Local communications facilities; Solar energy facilities; Accessory uses on
deed restricted parcels**

**Adopted Amendments: N.J.A.C. 7:50-2.11, 4.1, 5.19, 5.22, 5.23, 5.24, 5.25,
5.26 and 5.47**

Adopted New Rule: N.J.A.C. 7:50-5.36

Proposed: April 18, 2011 at 43 N.J.R. 928(a)

Adopted: October 14, 2011 by the New Jersey Pinelands Commission,
Nancy Wittenberg, Executive Director

Filed: December 8, 2011 **with substantive changes** not requiring additional
public notice and comment (see N.J.A.C. 1:30-6.3).

Authorized by: New Jersey Pinelands Commission

Authority: N.J.S.A. 13:18A-6j.

Effective Date: January 3, 2012

Expiration Date: Exempt.

The New Jersey Pinelands Commission (Commission) is adopting amendments to Subchapters 2, Interpretations and Definitions; 4, Development Review; and 5, Minimum Standards for Land Uses and Intensities, of the Pinelands Comprehensive Management Plan (CMP). The amendments and new rule were proposed on April 18, 2011 at 43 N.J.R. 928(a). The adopted

amendments relate to the installation of solar energy facilities and the installation of local communications antenna on existing structures in the Pinelands.

In association with publication of the proposed amendments in the April 18, 2011 issue of the New Jersey Register, the Pinelands Commission transmitted the proposal to each Pinelands municipality and county, as well as to other interested parties, for review and comment. Additionally, the Pinelands Commission:

- Sent notice of the public hearing to all persons and organizations which subscribe to the Commission's public hearing registry;
- Sent notice of the public hearing and provided a copy of the rule proposal to those groups and individuals that had previously participated in solar rule stakeholders meetings;
- Placed advertisements of the public hearing in the four official newspapers of the Commission, as well as on the Commission's own web page;
- Submitted the proposed amendments to the Pinelands Municipal Council pursuant to N.J.S.A. 13:18A-7f;
- Distributed the proposed amendments to the news media maintaining a press office in the State House Complex;
- Published a copy of the proposed amendments on its web page at www.nj.gov/pinelands; and
- Distributed press releases concerning the proposed amendments to the news media

Summary of Hearing Officer Recommendations and Agency Response:

A formal public hearing was held before the Commission staff on May 19, 2011. Fifteen people attended the hearing; oral testimony on the rule proposal was provided by six individuals. The hearing officer's recommendations are in accordance with the public comment and agency responses below.

Oral comments were recorded on magnetic tape which is on file at the Commission's office at 15 Springfield Road, New Lisbon, New Jersey. The record of this rulemaking is available for inspection in accordance with applicable law by contacting:

Betsy Piner

Pinelands Commission

P.O. Box 359

New Lisbon, NJ 08064

In addition to the oral comments, the Commission received 44 written comments, six of which were from individuals that provided oral comment at the public hearing.

Summary of Public Comments and Agency Responses:

The Commission accepted oral comments on the April 18, 2011 proposal at the above-discussed May 19, 2011 public hearing and written comments by regular mail, facsimile or e-mail through June 17, 2011.

The following individuals and organizations submitted comments:

1. Daniel Jassby
2. Honorable Joseph Lachawiec, Mayor, Ocean Township
3. Robert Moyer

4. Lee Snyder
5. Ms. Grace Gambino
6. Lisa Quartararo
7. Christian Jannen
8. Peter Ferwerda
9. Joy Ramer
10. Tiffany Cuviello, PP, on behalf of the Pinelands Municipal Council
11. Ken Burkhardt
12. William A. Rodio, Esq.
13. Robert Ritter
14. Millicent Moore
15. Eric McKinley
16. Kristen Thompson-Huber
17. Gloria Archambault
18. Edward Poplawski
19. Linda Mack, Trustee Monmouth County Audubon Society
20. William Kahane
21. Tari Pantaleo
22. David Smith
23. Phyllis Erlich Greene
24. Carol Dolly Weiss
25. James Rosenthal
26. Warren Gager

27. Kurt Munkacs and Nancy Jefferies
28. Jeff Tittel, Director, NJ Sierra Club
29. Anne Marquardt
30. Jaclyn Rhoads, Pinelands Preservation Alliance and Emile DeVito, NJ Conservations Foundation
31. Debbie Jaffe
32. John and Jenny Bryans
33. Shannon Moore
34. Jane Bourquin
35. Ken Kavulia
36. Denise Lytle
37. Wendy and Mike Brophy
38. Ted Gorden, Pine Barrens Inventories
39. Leona Z. Fluck
40. Chris Baeckstrom
41. Charles and Elizabeth Gibbons
42. Ann-Marie Woods
43. David Kook
44. Kat Besch

The Commission's detailed response to the comments is set forth below.

The numbers in parentheses after each comment correspond to the list of commenters above.

General Comments

1. COMMENT: One commenter expressed support for the solar facility amendments to the CMP. Another commenter states that although he is a member of the Pinelands Preservation Alliance (PPA), he believes that PPA's opposition to the proposed CMP amendment is short sighted. The commenter encourages the Commission to move forward with the proposed amendments. Still another commenter urges adoption of the amendments and further urges that the adoption process be expedited. (2, 7, 20)

RESPONSE: The Commission appreciates the support of these commenters.

2. COMMENT: One commenter notes that the proposed CMP amendments do not discuss the role of Senate Bill 2126. (10)

RESPONSE: Senate Bill 2126 permits the development of solar and wind facilities and structures on landfills and resource extraction sites under certain circumstances. In the Pinelands Area, it is only solar facilities which are permitted by the Bill. This Bill was in the process of being drafted and considered by the State Legislature at the same time as the Commission was beginning the rulemaking process for these CMP amendments. Commission staff worked closely with elected State officials throughout the process to ensure that Senate Bill 2126 would be harmonious with the solar energy facility CMP amendments.

In fact, following passage of the bill by both houses of the State Legislature in January of 2011, the Commission requested a conditional veto of the bill by the Governor so that its provisions could be revised to be consistent with the CMP amendments that had recently been proposed by the Commission. Following the conditional veto, the bill was returned to the Senate and passed in an amended form in April of 2011. It was forwarded to the State Assembly in May of 2011 where it currently awaits consideration.

It should be noted that passage of Senate Bill 2126 constrains the ability of the Commission to deviate in any significant way from amendments and new rule as proposed in the April 18, 2011 New Jersey Register, particularly in terms of the siting of solar facilities at closed landfills, sites in need of remediation and resource extraction sites in the Preservation Area District, Forest Area and Special Agricultural Production Area.

3. COMMENT: One commenter suggested that the amendments should specify whether wetlands buffers would be required at the site of a proposed solar installation or if the solar facility (on uplands) could extend up to the wetlands boundary. The commenter also questioned how any required wetlands buffer for a solar facility would differ from that required for a residential development. (1)

RESPONSE: The development of solar energy facilities is subject to all of the environmental standards contained in the CMP, including those related to the protection of wetlands. Buffers to wetlands will be required pursuant to N.J.A.C. 7:50-6.14. Generally, a 300 foot buffer is required; however, buffer determinations are site specific and dependent on a number of factors, including

the type and intensity of the proposed development and the size and quality of wetlands on or in the vicinity of the parcel being developed. Pursuant to N.J.A.C. 7:50-6.7(c), the Buffer Delineation Model for New Jersey Pinelands Wetlands may be utilized as a guide in determining the extent of the buffer area required to ensure that no significant adverse impact to wetlands will occur from the development of a solar facility.

4. COMMENT: One commenter suggests that the amendments should encourage the planting of environmentally favorable vegetation, such as native grasses that do not need to be mowed, as a means to stabilize soil beneath pole mounted solar arrays. (1)

RESPONSE: The Commission agrees that use of native vegetation is desirable for both soil stabilization and the establishment of Pinelands habitat. The Commission encourages the use of native grasses, consistent with the Commission's landscaping and revegetation guidelines at N.J.A.C 7:50-6.26. In addition, Commission staff is working with the State Soil Conservation Committee in developing a standard Pinelands native seed mix to further facilitate use of native Pinelands grasses that are tolerant of the droughty and nutrient poor soils of the Pinelands.

5. COMMENT: Several commenters support the development of solar energy facilities on previously disturbed portions of closed landfills but not on areas that have become habitat for threatened or endangered animal or plant species. (2, 11, 12, 13, 14, 15, 16, 17, 19, 22, 24, 25, 26, 27, 29, 31, 32, 33, 36, 43, 44)

RESPONSE: Pursuant to N.J.A.C. 7:50-5.1 of the CMP, no development may be carried out by any person in the Pinelands Area unless that development conforms to the minimum environmental standards of the CMP. This is an existing CMP requirement which applies to all development in the Pinelands Area, including the development of solar energy facilities on previously disturbed portions of closed landfills. CMP environmental standards (N.J.A.C. 7:50-6) preclude any development deemed to adversely impact habitats that are critical to the survival of any local populations of threatened or endangered animal species as designated by the New Jersey Department of Environmental Protection (DEP). Additionally, these standards preclude any such development deemed to adversely impact the survival of any local populations of those plants designated by DEP as threatened or endangered as well as those plants that are identified in the CMP as threatened or endangered plants of the Pinelands.

6. COMMENT: One commenter suggests that the CMP amendments should encourage the development of “energy parks” to facilitate solar installations of sufficient size to cover the costs associated with utility interconnection.(2)

RESPONSE: The feasibility of the development of “energy parks” or the concentration of solar energy facilities is dependent on many factors, perhaps most importantly access to nearby electric distribution lines. The Commission believes that the amendments and new rule now being adopted will facilitate such development in appropriate Pinelands management areas if sites are well chosen with respect to distribution line access. The Commission will closely monitor the

development of solar energy facilities to ensure that the amendments result in the development of an appropriate number of solar energy facilities within appropriate management areas of the Pinelands. Future amendments will be proposed if the Commission determines that the amendments are not attaining the desired outcome.

7. COMMENT: One commenter states that it is his understanding that the proposed CMP amendments would allow development of a solar energy facility on the environmentally closed Southern Ocean Landfill, as well as on an adjacent parcel that appears to have been used for resource extraction purposes related to the landfill operation. He reports that it is his further understanding that the development of a solar energy facility on the adjacent site purported to be a former resource extraction site would require the submission of a separate development application to the Commission. The commenter supports the development of solar energy facilities on resource extraction sites that are adjacent to landfill sites when such sites are disturbed as a result of landfill operations and on contiguous parcels where landfill closure, site remediation or resource extraction activities are controlled by the same entity. He further recommends that these applications be merged to a single application to minimize the cost of application and interconnection studies. The commenter requests that if such an amendment to the rule is problematic, that applications such as those described herein be processed and reviewed by the Commission in a coordinated manner. (2)

RESPONSE: The Commission cannot comment on a specific application until such time as it has been filed with and reviewed by Commission staff.

Likewise, the eligibility of any particular parcel for solar facility development, be it a former landfill or adjacent resource extraction site, is outside the scope of this rule adoption as such a determination would require specific site investigation and analysis. In terms of the application process itself, there is nothing in the CMP nor in the amendments now being adopted which would preclude the submission and processing of a single application for the development of a solar energy facility as described by the commenter.

8. COMMENT: Two commenters are opposed to allowing solar energy facilities on any parcel in any management area that has been “set aside” as open space. (4, 9)

RESPONSE: The CMP amendments do not authorize the development of solar energy facilities on any parcel that has been permanently protected as open space.

9. COMMENT: One commenter mistakenly states that the proposal “does not embrace the Nation’s energy needs” and suggests that language be included to embrace new technology that is consistent with the management policy and goals of Pinelands legislation. (8)

RESPONSE: The Commission disagrees with the commenter. The Commission identifies National energy independence as one of the drivers toward the Commission’s desire to create environmentally appropriate opportunities for the generation of clean renewable energy in the Pinelands Area. It is the

Commission's belief that the CMP amendments are suitably flexible, as reflected in the definition of a solar energy facility to accommodate future technological enhancements related to solar energy production.

10. COMMENT: One commenter questions whether the proposal conflicts with the Sustainable Energy Practices of the U.S. Department of the Interior, suggesting that the proposal would impose adverse impacts on the regions eco-system, surface and ground waters and adjacent coastal areas. (8)

RESPONSE: The Commission disagrees with the commenter's assertion that the CMP solar energy amendments will impose adverse impacts to the ecological resources of the Pinelands. It is noteworthy that all of the Commission's environmental standards apply to the proposed siting of solar energy facilities, the development of such facilities would be permitted only in appropriate management areas and only previously disturbed sites would be eligible in the most environmentally sensitive areas of the Pinelands.

11. COMMENT: One commenter suggests that solar energy facilities be prohibited on any site where trees are growing. (34)

RESPONSE: The Commission disagrees with the comment. To do so would be to treat solar energy facilities in a manner that is inconsistent with all other permitted uses in the Pinelands Area, including those that are far less benign (e.g. residential, commercial, institutional buildings) than are solar energy facilities. Of far more importance is adherence to the CMP's minimum environmental standards which will prohibit development on wetlands, within required wetlands buffer areas, and on habitats critical to the survival of local

populations of threatened and endangered species. Solar facility development will be required to meet all of these standards.

12. COMMENT: Two commenters expressed support for the installation of solar panels on brownfields, old industrial sites, rooftops, along roadways and/or close to population centers. (42, 43)

RESPONSE: The Commission appreciates the commenter's support for these aspects of the CMP amendments.

13. COMMENT: Two commenters are opposed to the development of solar energy facilities on any previously disturbed site that has been subsequently restored to a natural state, either by natural processes or by active restoration. (3, 4)

RESPONSE: The Commission does not agree that the CMP should prohibit such development, provided all CMP environmental standards are met. In particular, lands in the Regional Growth Area, Rural Development Area, Pinelands Villages or Pinelands Towns, all of which are designated by the CMP for some level of residential and nonresidential development, should not be subject to such a prohibition. Moreover, the Commission has identified very limited acreage in the Forest Area, Preservation Area District, Agricultural Production Area and Special Agricultural Production Area that would likely be developable for solar energy production due to unsuitable proximity to electric distribution lines. The CMP amendments prohibit the development of solar energy facilities on resource extraction sites that have been restored or are under an obligation to be restored upon cessation of resource extraction operations.

Natural restoration occurs at highly variable rates within the Pinelands Area, in some cases progressing rapidly in the presence of soils containing adequate organic content and in other cases at exceedingly slow rates (e.g., decades to one-hundred plus years) in the case of low organic, high mineral content surface soils. Under the proposed rules, solar energy facilities must be removed from a parcel and restoration of the parcel is required within 12 months of the cessation of the use of the solar energy facility. The Commission's revegetation and landscaping plan requirements, specified at N.J.A.C 7:50-6.24, ensure the ultimate restoration of these parcels upon termination of solar energy production. Such restoration is not ensured in the absence of the development of solar energy facilities at these previously disturbed parcels.

14. COMMENT: One commenter suggested that industrial uses of land are incompatible with the objective of the Pinelands National Reserve. (8)

RESPONSE: The Commission disagrees with the commenter. The Pinelands Area has historically supported various industrial uses including lumber production, iron smelting, and charcoal and glass production. While solar energy production as a principal use may qualify as an industrial use, it is best characterized as light industry with a relatively benign impact on the environment. Both the Pinelands Protection Act and the Pinelands CMP call for the permissibility of such uses in appropriate Pinelands management areas. The Commission believes the CMP amendments now being adopted are consistent with that objective.

15. COMMENT: One commenter recommends that the Commission develop a solar infrastructure plan to specify where solar energy facilities are appropriate, suggesting that such a plan should exclude solar facilities from forested areas and critical habitat. (28)

RESPONSE: The amendments now being adopted represent the Commission's solar infrastructure plan. These amendments restrict solar energy facilities from being built in areas of critical habitat and further limit their development in the Preservation Area District, Forest Area and Special Agricultural Production Area by restricting them to previously disturbed landfill sites, resource extraction operations and sites in need of remediation of contamination due to waste, hazardous waste or toxic substance. Within the Agricultural Production Area and Rural Development Area, solar facilities are directed away from areas that exhibit the highest ecological values in the Pinelands (e.g. large contiguous areas of forest, undisturbed drainage units, undisturbed wetlands or prime habitat for characteristic and rare Pinelands plant and animal populations). In the Agricultural Production Area, solar facilities are further directed away from areas that are underlain by prime farmland soils. Mapping of such areas is or will be made available on the Commission's website. The commenter suggests that the Commission exclude solar energy facilities from all forested areas of the Pinelands but to do so would single out and penalize solar facilities by excluding their development where other less benign development (e.g. residential, commercial and institutional buildings) would be permitted.

16. COMMENT: One commenter asserts that the proposed rules create green jobs but hurt the environment (28)

RESPONSE: The Commission disagrees with the commenter's assertions that the amendments will negatively impact the environment. Solar facilities must comply with all CMP environmental standards, as is required of any development in the Pinelands Area.

17. COMMENT: Three commenters suggest placement of solar energy facilities throughout the State on impervious surfaces as an alternative to developing such facilities on sensitive Pinelands habitats. (14, 21, 23)

RESPONSE: The Commission agrees with the preference expressed by the commenters for the siting of solar energy facilities on existing impervious surfaces and as a result, has exempted from Pinelands application requirements all accessory solar energy facilities that are installed on any existing structure or impervious surface. The Commission recognizes, however, that limiting all solar energy facilities to existing impervious surfaces would severely restrict their development and be inconsistent with Senate Bill 2126. Similarly, the Commission would not support limiting the development of any new structures (buildings, etc.) to only those sites that are already covered by impervious surfaces. Rather, the CMP generally limits such uses to management areas (Regional Growth Areas, Pinelands Towns, Pinelands Villages and Rural Development Areas) where development is appropriate and requires adherence to the minimum environmental standards of the CMP.

18. COMMENT: One commenter recommends that the proposed rules should outline criteria and require specific standards (for landfill closure) stating that “To do nothing would continually allow these sites to leach toxins into our groundwater and environment”. (28)

RESPONSE: The solar energy facility amendments permit the development of solar energy facilities only on environmentally closed landfills. The commenter appears to have missed the fact that the amendments require that leachate generation be addressed prior to the development of a solar energy facility at the site of a closed landfill. CMP requirements for the closure of landfills in the Pinelands remain unchanged by the amendments.

19. COMMENT: One commenter suggests that the Commission withdraw the current rule proposal and propose a new rule that will promote solar panels in appropriate areas such as landfills and previously disturbed mining sites (28)

RESPONSE: The Commission sees no need to withdraw the amendments and repropose a new rule. In fact, the amendments permit the development of solar energy facilities at closed landfills and certain previously disturbed resource extraction (mining) sites as suggested by the commenter but do so in a manner that ensures the abatement of landfill leaching problems and limits solar to only those portions of resource extraction operations that are not subject to the Commission’s restoration standards.

20. COMMENT: One commenter suggested that solar energy facilities be developed within the “air rights” over the NJ Turnpike and the Garden State Parkway. (36)

RESPONSE: The general comment is beyond the scope of the Commission's jurisdiction but the Commission would take no exception to the development of solar energy facilities over existing impervious surfaces within those portions of the Garden State Parkway that are within the Pinelands Area, provided all CMP environmental standards, including those related to cultural resources, would be met.

21. COMMENT: One commenter recommends that the proposed CMP amendment be revised to confine solar energy facilities to rooftops, landfills, un-restored mining site and parking lots. (38)

RESPONSE: While the sites listed are some of those already included in the amendments, the Commission does not agree that the amendments need to be revised in the manner suggested. In fact, the amendments permit accessory solar energy facilities on existing structures and impervious surfaces and would not preclude such facilities as a principal use in a similar setting within many Pinelands management areas (e.g., Regional Growth and Rural Development Areas). The amendments also provide for solar facilities at the site of environmentally closed landfills and in previously disturbed areas of resource extraction operations that are not subject to the Commission's site restoration standards.

22. COMMENT: One commenter expresses concern that the proposed CMP amendment does not adequately address infrastructure, security, and safety needs of a solar facility such as security lighting and fire breaks. (42)

RESPONSE: The Commission does not believe that the amendments need to address such matters as the facilities pose no significant safety or fire risk to the resources of the Pinelands. Such considerations are more appropriately addressed at the municipal level and by solar energy facility owners.

23. COMMENT: One commenter expressed concern that roadway construction and fill materials associated with the development of a solar energy facility will result in the introduction of non-native species to the Pinelands Area. (42)

RESPONSE: The Commission disagrees that the development of solar energy facilities poses any greater risk of introducing non-native species to the Pinelands Area than any other form of permitted development. The Commission's revegetation and landscaping standards and guidelines provided at N.J.A.C 7:50-6.24 through 6.26 would apply to this and all other development activity in the Pinelands Area. It should be noted that most solar energy facilities are likely to be located on already cleared land (due to the expense of land clearing) and that the amount of new disturbance associated with such facilities will be minimal.

24. COMMENT: One commenter expressed concern that the creation of special zoning for solar energy facilities in Pinelands Villages constitutes "spot zoning" and will impose adverse impact to residents of Pinelands Villages. (42)

RESPONSE: Municipalities that wish to permit solar facilities within their Pinelands Villages will be able to do so through a number of mechanisms. Special zones do not necessarily need to be created. Rather, a municipality might elect to simply add solar facilities to the list of permitted or conditional uses within an

existing commercial or industrial zone. Another approach might be the creation of an overlay district, within which solar facilities would be permitted subject to appropriate conditions. In any case, the permitted solar facilities will be required to be compatible with the character and magnitude of existing structures and uses within any particular Pinelands Village pursuant to N.J.A.C. 7:50-5.27(a)2. Commission review and approval of any such municipal ordinance will be required. “Spot Zoning” is a term of art associated with a lack of comprehensive planning, and that will not be the case here.

25. COMMENT: One commenter states that there are at least 5 landfill and hazardous waste sites and 19 mining sites that exist in the Pinelands, suggesting that at least 24 solar energy facilities would be permitted under the proposed rule. The commenter further suggests that solar energy facilities be located only near designated growth areas or on top of existing structures. (30)

RESPONSE: The Commission is unfamiliar with the commenter’s cited landfill and hazardous waste figures but does agree that only a limited number of sites would be feasible for the development of solar energy facilities. For example, only previously disturbed resource extraction operations that are not required to be restored can be considered. These limits result in a very small proportion of all of the resource extraction sites in the Pinelands Area being eligible for the siting of a solar energy facility. In addition, the feasibility of siting a solar energy facility on an eligible mining parcel is in large part based upon the site’s proximity to existing electric distribution lines. It is highly likely that many sites that are otherwise eligible for the development of a solar energy facility will

not be economically viable due to excessive distance to suitable electric distribution infrastructure.

26. COMMENT: One commenter suggests that the Commission cannot proceed with the solar energy rule adoption until it has mapped all of the sites in the Pinelands Area that would qualify for solar energy installations. (31)

RESPONSE: The detailed site specific analysis required to determine whether a particular site is eligible for and likely to be developed as a solar energy facility is beyond the scope of the amendments. The Commission has, however, performed an analysis of known resource extraction facilities, landfills and farmed areas within the Pinelands Area to provide a general idea of the location of eligible sites. Proximity to a 69 kV electric distribution line, the predominant higher voltage line available in most of the Pinelands, was then used to identify how much of the eligible acreage was likely to be deemed suitable for the development of a solar facility. Within the development-oriented Pinelands management areas (Regional Growth, Rural Development, Pinelands Towns and Pinelands Villages) where the amendments generally permit solar facilities on any parcel, the Commission estimates that there are 970 farmed upland acres (out of a total 20,300 acres in these areas) that are within 1,000 feet of a 69 kV electric distribution line. Farmed acres were mapped in the development-oriented areas due to the fact that they are already cleared, making them most attractive to those seeking to site solar facilities. In the conservation-oriented Pinelands management areas (Preservation Area District, Forest Area, Special Agricultural Production Area), where the amendments limit the development of solar facilities to closed

landfills, sites in need of remediation or resource extraction sites not under a restoration obligation, the Commission estimates that there is only one existing landfill and approximately 115 acres of eligible resource extraction lands that are within 1,000 feet of a 69 kV electric distribution line. All of this acreage is in the Forest Area. In the Agricultural Production Area, where the amendments permit solar facilities on any parcel subject to certain size limitations, there are 650 acres of farmed uplands within 1000 feet of a 69 kV electric distribution line. All of this data points to the fact that opportunities for the siting of solar energy facilities in the Pinelands, particularly within the conservation-oriented management areas, are likely to be extremely limited.

On-Site and Off-Site Infrastructure (N.J.A.C. 7:50-5.36(a)1 and 3)

27. COMMENT: One commenter notes that the CMP amendments prohibit any offsite development associated with the development of solar energy facilities in the Forest Areas and other protection areas. The commenter further states his understanding that offsite development, in the context of the CMP amendments, includes the installation of new poles and power lines within a new right of way and would not include the addition of new power lines on existing poles or the upgrade of existing poles within an existing right of way. (2)

RESPONSE: The commenter is correct in his assessment of the proposed prohibition relating to offsite development in the Forest Area and the intended permissibility of upgraded poles and new or larger power lines on existing poles .

28. COMMENT: One commenter states that the proposed rule would allow power lines to go through environmentally sensitive areas. (28)

RESPONSE: The commenter's attention is drawn to existing N.J.A.C 7:50-6.13 (Linear improvements), which outlines the Commission's standards for the installation of utility transmission and distribution facilities. In addition, N.J.A.C 7:50-5.36(a) and (b) impose additional limitations on the development of distribution line rights-of-way.

29. COMMENT: Many commenters suggest that the development of all infrastructure through the Preservation Area District and Forest Area be prohibited, even where such infrastructure would be necessary to support a solar energy facility at the site of a closed landfill, hazardous waste cleanup site or a resource extraction site. (11, 12, 15, 16, 17, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 39, 40, 41, 44)

RESPONSE: The Commission recognizes the need to rigorously restrict the development of offsite infrastructure in the Preservation Area District and Forest Area and has incorporated standards in the CMP amendments to eliminate or minimize such impacts associated with the development of solar facilities. First, the amendments limit the possibility for the development of solar energy facilities in the Preservation Area District and Forest Area to environmentally closed landfills, resource extraction sites not under an obligation for restoration and sites in need of toxic or hazardous substance remediation, and in so doing, greatly limits the number of sites that would be eligible for such development. In addition, the amendments limit both on-site and off-site infrastructure to only that

which is necessary to accommodate the use and further limits the creation of new rights-to-way to a maximum of 20 feet, unless additional width is necessary to address site specific or reliability concerns. Further, the amendments require that any proposed off-site infrastructure be located and screened in such a way as to minimize visual impacts. Importantly, because the creation and maintenance of rights-of-way impose significant project costs, the Commission anticipates that only those sites that are proximate to existing electrical distribution lines will prove to be feasible for solar facility development. The Commission will, as specified in the amendments, require the use of previously disturbed lands such as existing access roads for routing linear electrical service connects to off-site distribution lines.

Decommissioning and Revegetation Requirements (N.J.A.C. 7:50-5.36(a)4)

30. COMMENT: Two commenters expressed concern with the lack of financing assurances (e.g. bonding) or other impediments to the proper decommissioning and abandonment of solar energy facilities. (8, 9)

RESPONSE: The Commission recognizes the concerns expressed by these commenters over the availability of funds to decommission a solar energy facility at the cessation of its use. The Commission chose not to mandate specific financial arrangements but would take no exception to a municipality doing so by including such provisions in its master plan and land use ordinances. If municipalities are unable to require decommissioning funding contingencies

without enabling rules, the Commission would consider adopting such an amendment in the future.

31. COMMENT: One commenter mistakenly states that the rule proposal contains no provision for the restoration of a site upon termination of the generation of solar energy and questions why this is so. (8)

RESPONSE: The commenter's attention is drawn to proposed N.J.A.C 7:50-5.36-(a)4.i and ii.

32. COMMENT: One commenter questions the number of jobs that will result from the proposed rule as well as how solar panels will be disposed of upon termination of their use. (8)

RESPONSE: In its rule proposal, the Commission cited a University of California at Berkley study that concludes that renewable energy technologies generate more jobs per unit of energy than fossil fuel-based technologies. Reportedly, job creation attributable to solar photovoltaic facilities ranges between 25 and 50+ jobs per mega watt of electricity produced when both direct and indirect job creation is considered. The Commission has determined that there is an emerging industry devoted to the recycling of end-of life solar panels. Notwithstanding the development of such recycling markets, broken and end-of life solar panels pass Federal TCLP-RCRA leaching criteria for nonhazardous waste and can therefore be disposed of in landfills.

33. COMMENT: One commenter recommends that decommissioning of solar energy facilities in the Preservation Area District include mandatory

reforestation with native Pinelands vegetation to match existing surroundings.

(30)

RESPONSE: The Commission agrees that site restoration and revegetation must be properly conducted. The amendments requires that such vegetation be performed in compliance with the Commission's revegetation and landscaping plan requirements as specified at N.J.A.C 7:50-6.24. These requirements specify the use of native Pinelands trees and shrubs.

Siting Limitations in the Preservation Area District, Forest Area and Special Agricultural Production Area (N.J.A.C. 7:50-5.36(b))

34. COMMENT: One commenter recommended that solar facilities be permitted as a principal use on parcels in the Forest Area with no existing development, on those portions of a parcel where residential cluster development would be permitted under the CMP. This would allow solar facilities to be installed on two to 12% of a parcel, depending on permitted zoning densities. The commenter also noted that the CMP currently permits 100% clearing of undisturbed uplands in the Forest Area for agriculture. (1)

RESPONSE: The CMP does permit unlimited clearing of uplands for agricultural purposes in the Forest Area. Agriculture represents an important historic and economic activity in the Pinelands, one whose protection and enhancement is specifically called for in the Pinelands Protection Act ((N.J.S.A.13:18A-9). Solar energy facilities are not afforded the same status under the Act or the CMP.

The Commission does not agree with the suggestion that solar facilities be permitted as a principal use on any vacant parcel in the Forest Area. As is appropriate for this highly sensitive management area, N.J.A.C. 7:50-5.36(b) provides only limited opportunities for the development of solar facilities in the Forest Area, at already disturbed sites. Accessory solar facilities, including those accessory to residential cluster developments, are also permitted in the Forest Area.

35. COMMENT: One commenter recommended that solar facilities be permitted in the Forest Area as a principal use at the site of abandoned buildings and contiguous disturbed land that has not been restored (1)

RESPONSE: The Commission disagrees. Solar facilities are being authorized only at those Forest Area sites which the Commission believes are appropriate for such development, namely, environmentally closed landfills, certain resource extraction sites, and sites in need of hazardous or toxic substance remediation. The Commission does not believe it is advisable or necessary to expand opportunities for the development of solar facilities in the Forest Area to on which an old or abandoned building is located. Ample opportunities for the solar facility development exist in other less sensitive Pinelands management areas.

36. COMMENT: One commenter notes that it is his understanding that the proposed amendments would allow development of solar energy facilities on an environmentally closed landfill except for areas specifically identified on an approved closure plan as being protected or restored, provided that the solar

facility is located and screened in such a way as to minimize visual impacts from public roads, adjacent residences and other specified areas. (2)

RESPONSE: While generally correct, the commenter should keep in mind that the amendments exclude the development of solar energy facilities at the site of a resource extraction operation in areas that are required to be, or have been restored. Restoration in such instances is governed by the Commission's resource extraction operation restoration standards specified at N.J.A.C. 7:50-6.69. Restoration at the site of an environmentally closed landfill is not analogous to restoration at a resource extraction operation unless the landfill restoration includes the excavation and complete removal of buried solid waste. Because of this, the Commission intends to evaluate the proposed installation of solar energy facilities on environmentally closed landfills on a case by case basis. The Commission may, for example, permit the installation of a solar energy facility in a stabilized area at the site of an environmentally closed landfill where such stabilization is characterized only by the placement of soil cover and stabilizing vegetation over buried refuse, as such conditions do not constitute "restored" lands. The amendments do not provide for the development of solar energy facilities on permanently protected lands. In addition, CMP environmental standards must also be met and this may preclude additional portions of a landfill parcel from being developed with solar facilities. Lastly, the requirement for the minimization of visual impacts of principal use solar energy facilities is required in all Pinelands management areas by the provisions of N.J.A.C. 7:50-5.36(a)2.

37. COMMENT: Many commenters expressed opposition to any changes to the CMP that would authorize development of solar energy facilities in the Preservation Area District, some suggesting that to do so would take away from the wilderness experience and others suggesting that to do so would be in conflict with the Pinelands Protection Act. (3, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44)

RESPONSE: The Commission disagrees that allowing the development of solar energy facilities in the Preservation Area District at pre-existing landfills, certain resource extraction sites, and sites in need of hazardous or toxic substance remediation is in conflict with the Pinelands Protection Act. These are already disturbed sites which are entirely appropriate for solar facility development. In addition, it must be noted that upon its adoption, Senate Bill 2126 would amend the Pinelands Protection Act to specifically permit solar facilities at these sites everywhere in the Pinelands Area, including the Preservation Area District.

The Commission believes that there are a very limited number of these previously disturbed sites within the Preservation Area District that would be feasible for the development of solar energy facilities, primarily due to limited access to electrical distribution lines as well as environmental restrictions such as the CMP's threatened and endangered species protection standards. Nevertheless, the Commission intends to monitor the number and location of proposed solar energy facilities in the PAD and may propose modifications to the solar energy facility standards of the CMP if the Commission determines that the number or

location of such proposed facilities is at an intensity that is contrary to goals of the CMP for that management area.

17. COMMENT: One commenter expressed opposition to any change to the CMP that would authorize solar energy facilities in the Special Agricultural Production Area. (3)

RESPONSE: The CMP amendments authorize the development of solar energy facilities in the Special Agricultural Production Area in very limited circumstances. Solar facilities will only be permitted in this management area at the site of a previously disturbed resource extraction operation not subject to a restoration requirement, at the site of a closed landfill or at a hazardous or toxic substance remediation site. The Commission has identified very limited acreage in the Special Agricultural Production Area that would likely qualify for the development of a solar energy facility. While not expected to be an issue, the Commission intends to monitor the number and location of proposed solar energy facilities in the Special Agricultural Production Area and may propose modifications to the solar energy facility standards of the CMP if the Commission determines that the number or location of such proposed facilities is at an intensity that is contrary to goals of the CMP.

38. COMMENT: Several commenters object to permitting solar energy facilities in the Forest Area. (8, 30, 38)

RESPONSE: The Commission recognizes the concerns expressed by these commenters but believes that the CMP amendments provide appropriate opportunities for the development of solar energy facilities in the Forest Area.

These are limited to previously disturbed sites of existing landfills, resource extraction operations not subject to mandatory site restoration and sites in need of remediation of hazardous or toxic substances. Again, this list of eligible sites is consistent with Senate Bill 2126. The Commission has determined that only limited acreage exists in the Forest Area that is likely feasible for solar energy generation, due primarily to the limited access to suitable electric distribution lines.

While not expected to be an issue, the Commission will closely monitor the development of solar energy facilities in the Forest Area to ensure that the rules result in the development of an appropriate number of solar energy facilities. Future amendments to the rule will be proposed if the Commission determines that the currently proposed rule is not attaining the desired outcome.

39. COMMENT: One commenter expresses support for capping of landfills prior to the placement of solar energy facilities as a means to protect ground and surface water and to mitigate methane gas emissions from landfills.
(28)

RESPONSE: The Commission appreciates the commenter's support for this portion of the amendments.

40. COMMENT: One commenter expressed concern that residential properties and non-landfilled properties that are contiguous to landfill sites could be annexed or combined with landfill sites for economy of scale purposes in overcoming the high cost to connect to an offsite electrical transmission line. (42)

RESPONSE: In the Preservation Area District, Forest Area and Special Agricultural Production Area, “annexing” of such properties will not make them eligible for solar facility development, except in cases where they meet the strict standards set forth at N.J.A.C. 7:50-5.36(b) that apply to the siting of solar energy facilities.

41. COMMENT: One commenter expressed a concern that solar energy facilities will result in the destruction of the Pigmy Pines Plains and related transition zone in Warren Grove. (8)

RESPONSE: The commenter’s concern over the destruction of the Pigmy Pines Plains and related transition zone in Warren Grove is unfounded. Solar energy facilities are subject to all of the environmental standards of the CMP, including wetlands standards and threatened or endangered species protections. Because the Pigmy Pines Plains and surrounding areas are prime habitat for threatened or endangered species, the siting of such a facility in an area which provides critical habitat necessary to the survival of a local population of threatened or endangered species would be prohibited. Moreover, N.J.A.C 7:50-5.36(a)2 limits the siting of solar energy facilities where such siting would impose a visual impact and/or degrade the ecological integrity of the Pine Plains. Finally, in the Preservation Area District (and Forest Area), solar facilities will be permitted only at already disturbed sites (landfills, sites in need of remediation and certain resource extraction sites). The Commission is unaware of any such qualifying sites in the Pigmy Pines Plains and surrounding areas.

42. COMMENT: Many commenters request clarification of the following terms which are used in the rule proposal: “previously disturbed site”; “previously disturbed lands”; and “under an obligation to be restored”. (11, 12, 15, 16, 17, 19, 21, 22, 24, 25, 26, 27, 30, 31, 32, 33, 35, 36, 37, 39, 40, 41, 43, 44)

RESPONSE: Previously disturbed lands and previously disturbed sites are those lands that have been altered as a result of active human intervention and are typically characterized by the cutting and removal of vegetation and the excavation or redistribution of soil. Previously disturbed lands and previously disturbed sites may also contain solid or other anthropogenic waste materials. Sites that are under an obligation to be restored are those lands which are subject to the provisions of N.J.A.C 7:50-6.69, the CMP’s site restoration standards that are applicable to resource extraction sites that meet the requirements specified in Part VI of the CMP – Resource Extraction.

43. COMMENT: One commenter cites what he characterizes as historical failure to restore previously mined sites and questions if restoration will occur under the proposed solar CMP amendments. (8)

RESPONSE: The Commission disagrees with the commenter’s characterization of a historical failure by resource extraction operations to properly restore their sites. In the Commission’s experience, resource extraction operations frequently move across a site to mine resources and later return to previously mined portions of the site to resume operations. It is likely that the commenter is referring to areas of a resource extraction operation where mining is not currently ongoing but will resume as the operator progresses across the site

while managing site resources. In any case, the one or two resource extraction operations in the Pinelands Area that have ceased operations have restored their sites.

The amendments now being adopted will require restoration of any site, including a resource extraction site, upon the decommissioning of a solar facility. The only exceptions to this requirement are a parcel which will be put into active agricultural use following removal of the solar facility or a parcel which approved for another type of development in accordance with a municipal ordinance.

44. COMMENT: One commenter questions what area limits would be imposed on a solar energy facility if located in the Preservation Area District. (8)

RESPONSE: N.J.A.C 7:50-5.36(b)2 establishes criteria for siting of a solar energy facility in the Preservation Area District. Such facilities would be limited to previously disturbed sites (landfills, resource extraction operations not under an obligation to restore, and sites in need of remediation for hazardous or toxic substances). The area limits of a proposed solar energy facility would be limited by the extent of pre-existing disturbance and those additional areas in which further disturbance is necessary to effectuate the closure of a landfill or hazardous site remediation. Any area proposed for additional disturbance would be subject to review and approval by the Commission.

45. COMMENT: One commenter is opposed to the development of solar energy facilities on old landfill and mining sites in the Pinelands Area. (35)

RESPONSE: The Commission disagrees with the commenter. It is the Commission's view that development of solar energy facilities is appropriate at

environmentally closed landfills and on previously disturbed portions of resource extraction (mining) sites where the Commission's site restoration standards do not apply. Permitting solar facilities on such sites in the Pinelands Area is also consistent with Senate Bill 2126.

46. COMMENT: Many commenters support development of solar energy facilities on mining sites that have not been reforested or are not habitat for threatened or endangered animal or plant species, provided appropriate limits are established to constrain expansion beyond previously disturbed areas. (11, 12, 13, 14, 17, 19, 21, 22, 23, 24, 25, 27, 30, 31, 33, 36, 37, 38, 39, 40, 41, 44)

RESPONSE: The Commission appreciates the expression of support. Commission staff will review all such applications to ensure that proposed solar energy facilities are limited to only previously disturbed areas of resource extraction sites, as is required by the amendments.

47. COMMENT: One commenter incorrectly states that the proposed rule would permit solar energy facilities on wetlands, on restored and reforested areas of the Preservation Area District and in areas that contain threatened and endangered species. (28)

RESPONSE: The commenter is reminded that all of the CMP's environmental standards relating to wetlands protection and threatened or endangered species protection are applicable to the development of solar energy facilities. Moreover, the commenter's attention is drawn to the provisions of proposed N.J.A.C 7:50-5.36(b)2 which explicitly state that the development of solar energy facilities in the Preservation Area District (and Special Agricultural

Production Area) shall be further limited to previously disturbed lands that have not been subsequently restored.

48. COMMENT: One commenter incorrectly asserts that the proposed rule allows solar arrays and equipment to be placed on any quarry in the Pinelands.

(28)

RESPONSE: While true for quarries in the Regional Growth Area and Rural Development Areas, the commenter's attention is drawn to the provisions of N.J.A.C 7:50-5.36(b) which explicitly limits the development of solar energy facilities in the Preservation Area District and Special Agricultural Production Area to only those previously disturbed areas of resource extraction operations (quarries) that are not under an obligation to be restored pursuant to N.J.A.C 7:50-6, Part VI.

49. COMMENT: One commenter suggests that the Commission draft a rule to "only promote solar on landfills and previously disturbed mining sites" but to exclude solar within the boundaries of the Preservation Area. The commenter notes that there are more than 80 abandoned landfills in the Pinelands that could be used to site solar energy facilities. (28)

RESPONSE: The Commission believes that environmentally closed landfills, including those in the Preservation Area District, are suitable for the development of solar energy facilities provided the Commission's environmental standards are met and that off-site infrastructure is subject to the strict limitations specified at N.J.A.C 7:50-5.36(b). The Commission acknowledges that there are approximately 83 landfills within the Pinelands Area; however, the feasibility to

site a solar energy facility at each of these sites is highly site specific, in large measure due to the proximity to existing electric distribution lines. In fact, the Commission estimates that there are no Pinelands Area landfills within 1,000 feet of a 69 kV electric distribution line. It is noteworthy that 69 kV lines are currently the subject of a proposed petition to be eligible for tie in from a grid connected solar energy facility that can participate in the New Jersey SREC market.

Pinelands Development Credit Requirements (N.J.A.C. 7:50-5.36(b)3)

50. COMMENT: One commenter takes exception to the requirement for the purchase and redemption of one Pinelands Development Credit (PDC) for every 16 acres of land to be occupied by a solar energy facility in the Forest Area unless the solar energy facility is part of a comprehensive application for landfill closure or site remediation. The commenter states that this provision does not appear to conform to the purpose of the PDC program as described in N.J.A.C. 7:50-5.41 of the CMP which the commenter interprets to be for the sole purpose of increasing density in designated growth areas. The commenter also states that the reasoning for the PDC requirement is not clearly explained in the rule proposal and suggests that the installation of a solar energy facility does not represent a more intense use of a property but rather a reuse of lands that no longer have an ongoing use. The commenter suggests that the installation of solar energy facilities on these previously disturbed lands should be encouraged and not “taxed”. (2)

RESPONSE: The Commission disagrees with the commenter. The installation of a solar energy facility at the site of an environmentally closed landfill represents a second principal use of the parcel, with the landfill representing the first principal use and the solar energy facility representing the second. In the Preservation Area District, Forest Area and Special Agricultural Production Area, the opportunity for this second principal use did not exist prior to the CMP amendments now being adopted. An opportunity for additional development and economic revenue is therefore being provided. The Commission continues to believe that it is appropriate to require PDC use in return for allowing a new use in these otherwise highly restricted management areas. The required purchase and redemption of 0.25 PDC for each four acres of solar development acts to offset the permitted and intensified non-conforming use of the landfilled parcel by permanently protecting land in the environmentally sensitive or agricultural portions of the Pinelands Area.

The PDC Program is generally designed such that use of PDCs occurs in association with residential development in Pinelands Regional Growth Areas. However, the CMP also requires the use of PDCs in other management areas and for other types of development under certain circumstances. For example, PDCs must be used in association with certain municipal approvals granted in Pinelands Towns and Villages. PDCs must also be used in association with certain Waivers of Strict Compliance granted by the Pinelands Commission. This PDC requirement applies regardless of the management area in which the waiver site is located. The requirement for use of PDCs in association with the development of

solar facilities at certain landfill sites in the Preservation Area District, Forest Area and Special Agricultural Production Area represents another entirely appropriate use of the Commission's PDC Program.

51. COMMENT: One commenter takes exception to the PDC requirement noting that it should not apply to a landfill that complied with all DEP directives. The commenter further states that owners of non-compliant landfills should not have an advantage over landfills that were properly closed. (2)

RESPONSE: The Commission disagrees with the commenter. Landfills that were previously closed pursuant to DEP directives and the CMP would be eligible to recoup a portion of previously incurred landfill closure costs through the development of solar energy facilities due to the unanticipated opportunity for additional site development enabled through these CMP amendments. In the case of non-compliant landfills, the Commission aims to facilitate timely landfill closure by enhancing the financial returns resulting from solar energy revenues where such closure has not occurred in the absence of solar derived revenue. Lastly, the relatively minor cost of PDCs is unlikely to provide a competitive advantage for one landfill vs. another. Such advantage will instead be based upon the relative proximity to distribution lines, not the relatively minor cost to purchase and redeem PDCs, currently a one time cost which equates to between \$3,000 and \$4,000 per acre.

52. COMMENT: One commenter expressed concern over the requirement for an owner of an environmentally closed landfill and hazardous/toxic remediation sites to purchase of PDCs in order to install a solar energy facility of

the landfill. The commenter suggested that the Commission identify the number of landfill sites that would be impacted by this requirement and also suggested that municipally owned landfills be exempt from the PDC purchase obligation.

(10)

RESPONSE: The Commission disagrees with the commenter. The purchase and redemption of PDCs associated with the development of a solar energy facility at an environmentally closed landfill provides a mechanism for the permanent protection of land in the Preservation Area District, the Agricultural Production Areas and the Special Agricultural Production Area in exchange for the owner of a landfilled or environmentally remediated parcel being provided with the opportunity to obtain a second principal use on the parcel. While the Commission has estimated the number of parcels that would be impacted by the PDC purchase requirement to be quite small (only one such site is known), it is not possible to identify the precise number and location of such parcels as the feasibility of developing a solar energy facility on a particular parcel can only be made after conducting a detailed site specific analysis. The Commission disagrees that municipally owned landfills should be exempted from the PDC purchase requirement as a municipality would benefit from a second principal use of the landfilled or remediated parcel in the same manner as would a private owner.

53. COMMENT: One commenter suggests that the PDC requirement be increased beyond the currently proposed 0.25 PDCs for 4 acres of land occupied by the solar facility. (30)

RESPONSE: The Commission disagrees that the number of PDC's should be modified. The PDC requirements contained in the amendments are considered to be appropriate in that they will not act as a disincentive to solar facility development while at the same time enabling the owners of PDCs (those with constrained lands in the Preservation Area District, Special Agricultural Production Area and Agricultural Production Area) to share in the economic benefits enjoyed by solar facility developers.

Siting Limitations in the Agricultural Production Area (N.J.A.C. 7:50-5.36(c))

54. **COMMENT:** One commenter acknowledges that a ten acre parcel (the limit for solar energy facilities in the Agricultural Production Area) could generally support a 2 MW solar energy facility; however, site specific factors such as visual impacts, prime soils, wetlands, access to electrical distribution lines and overall cost may adversely impact the development potential for such facilities. The commenter suggests that a system of "solar development credits" be implemented which would permit the transfer of solar development rights from a constrained parcel to a more suitable parcel, particularly in a manner that would permit expansion of facilities beyond the maximum permitted by the amendments in the Agricultural Production Area. (7)

RESPONSE: The Commission recognizes the many economic and environmental limitations that will impact the number and scale of solar energy facilities likely to be developed in the Pinelands Area. Parcels in the Agricultural

Production Area will need to be carefully evaluated in terms of their ability to support a solar energy facility. Municipalities that are interested in permitting solar facilities within their agricultural zoning districts will be encouraged to do so in a manner which recognizes the feasibility of the affected sites.

While the Commission does not support the implementation of a region-wide solar development credit program at this time, it should be noted that the CMP provides Pinelands municipalities with the flexibility to modify the standards of the CMP to better fit local conditions, provided the goals and objectives of the CMP continue to be met. This flexibility may provide an opportunity for a municipality to adopt an ordinance which designates solar “receiving” and “sending” areas within appropriate portions of its Agricultural Production Area, much as the commenter suggests. In any event, the Commission intends to closely monitor the development of solar energy facilities in Pinelands Area and may propose future CMP amendments if the anticipated number and size of solar energy facilities developed do not reflect the goals of the CMP.

55. COMMENT: Two individuals support the development of solar energy facilities in the Rural Development Area, Agricultural Production Area and Special Agricultural Production Area Area, provided they are permitted on a limited basis in areas that have been previously disturbed but not restored. (9, 12)

RESPONSE: The Commission disagrees with the commenter’s suggestion that solar energy facilities in the Rural Development Area and Agricultural Production Area should be limited only to previously disturbed areas. The CMP amendments establish appropriate limits on the extent of clearing (30%) for solar

in the Rural Development Area and establish percentage limits (20% up to 10 acre maximum) in the Agricultural Production Area. Moreover, siting of solar energy facilities in the Rural Development Area is biased away from forested areas and areas with the highest ecological value. In the Agricultural Production Area, siting of solar energy facilities is biased away from prime agricultural soils and areas exhibiting the highest ecological value. In the case of the Rural Development Area, these limits reflect the extent of clearing associated with most Rural Development Area permitted uses (e.g. residential clustering and non-residential buildings) and in the Agricultural Production Area, the limits are reflective of the CMP's goal of preserving and enhancing farming. In the Special Agricultural Production Area, the proposed CMP amendments limit the development of solar energy facilities to just those sites that have been previously disturbed for landfilling or resource extraction (without the need to restore) or are in need of remediation for toxic or hazardous substances.

56. COMMENT: One commenter recommended that the permitted size of all solar energy facilities in the “Agricultural Preservation Area” be limited such that they not produce more than 10% of the energy use of the farm upon which they are located. The commenter further suggested that the Commission not encourage large industrial solar uses in agricultural areas as these facilities increase impervious cover and result in the loss of critical farming acreage. (19)

RESPONSE: The Commission disagrees with the suggestion that the permitted size of a solar energy facility serving a farm in the Agricultural Production Area be based upon the farm’s use of electricity. In fact, the

Commission made the decision to avoid having to evaluate historic and ongoing electricity consumption as a means of determining compliance with the solar energy facilities rules. Such an approach fails to recognize the ever increasing efficiency of solar electric facilities and would limit the ability of a farmer to upgrade to a more efficient system if such an upgrade would generate more electricity than the permitted threshold (10% is proposed by the commenter) even if the upgraded system could do so with a smaller footprint. The commenter's suggestion that large industrial sized solar generating facilities be excluded from Agricultural Production Areas is accomplished by the amendments which establish a 20% limit and 10 acre maximum for solar facilities on any parcel in this management area. Lastly, it must be noted that solar panels have a very low impervious surface footprint, as defined by State law.

Siting Limitations in the Rural Development Area (N.J.A.C. 7:50-5.36(d))

57. COMMENT: One commenter questioned why the limitations on solar facilities in the APA (maximum of 20% of a parcel, up to 10 acres) do not also pertain to the development of solar energy facilities in the Rural Development Area. Instead, the CMP amendments allow for clearing of up to 30% of a parcel in the Rural Development Area. The commenter suggests that limitations on solar energy facilities in the Agricultural Production Area and the Rural Development Area be identical. (7)

RESPONSE: The Commission disagrees with the commenter. The Agricultural Production Area and Rural Development Area are significantly

different management areas for which the CMP has appropriately different objectives. The Agricultural Production Area is an area in which the CMP's primary goal is the protection and enhancement of agricultural and horticultural uses. The 20% limitation and 10 acre maximum established by the amendments for solar facilities in the Agricultural Production Area are consistent with that goal, as is the requirement to avoid soils classified as prime farmland to the maximum extent feasible. The Rural Development Area is a transition area between the pristine Forest Area and existing growth areas, containing a mixture of uses including residential and commercial development, as well as agriculture. The 30% maximum clearing limit established by the amendments for solar facilities in the Rural Development Area is generally consistent with the amount of clearing associated with other permitted uses in this management area, including residential clustering and non-residential buildings.

58. COMMENT: One commenter suggests that the Commission consider removing the 30% clearing limit in the Rural Development Area, noting that other permitted uses in the RDA can result in 100% clearing of a parcel, subject to wetlands and other environmental constraints. (10)

RESPONSE: The Commission disagrees with the commenter's suggestion that clearing for solar facilities in the Rural Development Area be increased to 100% of the parcel. The 30% clearing limit established in the amendments is reflective of most comparable permitted uses (e.g. residential clustering and non-residential buildings) in the Rural Development Area. Although there are other permitted uses which result in greater clearing (e.g. agriculture, golf courses and

active recreation fields), such uses require few, if any structures and cannot be deemed similar to solar energy facilities. The Commission does not agree that 100% clearing for the development of a solar energy facility is appropriate in the Rural Development Area.

Other

59. COMMENT: One commenter questions whether a 2 MW solar energy facility, at an estimated cost of eight million dollars, would be subject to the existing Pinelands development application fee schedule. The commenter estimates that the fee for an eight million dollar solar energy facility would be \$43,750 and questions whether such a fee is appropriate for such development. (7)

RESPONSE: The CMP provides formulas for the calculation of the Commission's development application fees at N.J.A.C 7:50-1.6. Presuming that the commenter's estimated construction cost is accurate, the commenter's estimated fee would also be accurate if the proposed solar energy facility developer were a for-profit entity. If the proposed developer were a public entity, the application fee would be reduced by 50%. If the development application were proposed by a qualified tax-exempt religious association or corporation or a qualified tax-exempt non-profit organization, the maximum development application fee would be \$500.

60. COMMENT: One commenter expressed concern with the potential for a release of toxic components from solar panels and further expressed concern

over the funding mechanism that would ensure the clean up of released of toxics.

(8)

RESPONSE: The Commission has reviewed the scientific literature related to the potential release of hazardous or toxic compounds from solar panels including research conducted at Brookhaven National Laboratories and the National Renewable Energy Laboratory. The Commission has determined that solar panels do not pose a risk for hazardous or toxic material releases. In fact, end-of-life and broken photovoltaic modules pass Federal TCLP-RCRA leaching criteria for nonhazardous waste and can therefore be disposed of in solid waste landfills.

61. COMMENT: One commenter asserts that the resource extraction industry has taken advantage of the “laxity of enforcement of the CMP” and suggests that another industry (the solar energy industry) wishes to now do the same. (8)

RESPONSE: The Commission disagrees with the commenter. No evidence to substantiate the commenter’s assertion was presented nor does any exist to the Commission’s knowledge

62. COMMENT: One commenter states that greed and corruption resulted in mismanagement of federal western lands during the 1850’s and questions if the Commission desires to “repeat the horrific history of the Department of the Interior” during that time. (8)

RESPONSE: The Commission disagrees with the commenter. No evidence to substantiate the commenter's assertion was presented nor does any exist to the Commission's knowledge.

63. COMMENT: One commenter alleges that the Commission's Certificate of Filing and No Call Up processes do not protect the Preservation Area District from destruction and questions if the current rule proposal will fix this alleged situation. (8)

RESPONSE: The amendments now being adopted do not relate to and have no effect on the application procedures established in the CMP, namely the Certificate of Filing and call up processes. Again, no evidence was presented to substantiate the commenter's allegation. Further, thirty years of history demonstrates the Commission's successful protection of the Preservation Area District.

64. COMMENT: One commenter offers suggestions on the way in which Pinelands staff generally processes development applications. (8)

RESPONSE: The Commission appreciates the commenter's input; however, application procedures are outside the scope of the current rulemaking effort.

65. COMMENT: One commenter expressed concern over the potential spread of contamination resulting from a fire in which solar panels are consumed, or resulting from broken solar panels. (42)

RESPONSE: The Commission notes the findings of Brookhaven National Laboratories and the National Renewable Energy Laboratory which have

determined that solar panels do not pose a risk for hazardous or toxic material releases. In fact, end-of-life and broken photovoltaic modules pass Federal TCLP-RCRA leaching criteria for nonhazardous waste and can therefore be disposed of in solid waste landfills.

Summary of Agency-Initiated Change:

The Commission is making a change to the proposed amendments at N.J.A.C. 7:50-5.36(c) for purposes of clarification. This section of the amendments sets forth specific limitations which will apply to solar energy facilities located in the Pinelands Agricultural Production Area. Solar energy facilities in this Pinelands management area will continue to be limited to a maximum of 20 percent of any parcel, not to exceed 10 acres. Language is being added at N.J.A.C. 7:50-5.36(c)1 to clarify that those parcels on which a solar facility is proposed and for which farmland assessment is sought must also comply with Department of Taxation rules (N.J.A.C. 18:15) regarding farmland assessment eligibility, including occupied area restrictions on solar facility development which may be more limiting than those being adopted by the Commission for parcels in the Agricultural Production Area. The purpose of this change is to clarify the original intent of the amendment, avoid confusion and protect landowner eligibility for Farmland Assessment designation. As was noted in the rule proposal, the Commission is not involved in tax assessment determinations. However, the addition to the amendment will serve to put

applicants on notice that they should proceed with their solar energy facility proposals with full knowledge of the potential impacts on farmland assessment.

Federal Standards Statement

Section 502 of the National Parks and Recreation Act of 1978 (16 U.S.C. §471i) called upon the State of New Jersey to develop a comprehensive management plan for the Pinelands National Reserve. The original plan adopted in 1980 was subject to the approval of the United States Secretary of the Interior, as are all amendments to the plan.

The Federal Pinelands legislation sets forth rigorous goals which the plan must meet, including the protection, preservation and enhancement of the land and water resources of the Pinelands. The adopted amendments and new rule are designed to meet those goals by clearly outlining where solar energy facilities may be permitted as a principal use and specifying the limitations necessary to ensure continued protection of the Pinelands environment.

The adopted amendments and new rule are consistent with the federal government's efforts to achieve national energy independence through development of a diverse renewable energy portfolio. Significant federal funding has been made available through the American Recovery and Reinvestment Act of 2009 to assist U.S. businesses in the development of cost-effective solar energy technologies. These federal efforts are based on the belief that a growing solar industry stimulates the nation's economy by creating jobs in solar manufacturing and installation.

Increased utilization of clean renewable energy sources is consistent with federal Clean Air Act goals. Zero-emission solar technologies, such as solar electricity and solar water heating, can greatly improve outdoor air quality.

Increased reliance on clean renewable energy sources reduces pollution control costs for utility rate payers, tax payers and business and industry.

Solar energy technologies provide energy for heating, cooling, lighting homes and businesses and heating water without any air pollution emissions. The use of solar energy systems on buildings or from larger scale solar energy facilities replaces electricity generation from coal, natural gas, and oil power plants, leading to a reduction in air pollutants such as nitrogen oxides, sulfur dioxide, and mercury, and greenhouse gas emissions such as carbon dioxide.

The adopted amendments related to local communications facilities antennas relate to a topic for which the Federal government also has regulations. However, Federal regulations do not deal specifically with the siting of local communications facilities in terms of zoning or other land use designations. The Federal regulations do seek to foster a climate in which cellular service can succeed. The proposed amendments to N.J.A.C. 7:50-4.1(a)21 are designed to achieve that goal as well, in a manner which minimizes impacts on the scenic resources of the Pinelands.

There are no other Federal requirements which apply to the subject matter of these amendments and new rule.

Full text of the adoption follows (additional to proposal indicated in boldface with asterisks *thus*; deletions from proposal indicated in brackets with asterisks *[thus]*):

7:50-5.36 Solar energy facilities

(a)-(b) (No change from proposal).

(c) Special limitations on solar energy facilities as a principal use in the Agricultural Production Area:

1. Solar energy facilities may occupy up to 20 percent of any parcel but in no case shall exceed 10 acres*. **Those parcels for which Farmland Assessment is sought pursuant to N.J.S.A. 54-4.23.1 et seq. shall also comply with the provisions of N.J.A.C. 18:15 related to Farmland Assessment eligibility, including occupied area restrictions that may be more limiting***;

2-3. (No change from proposal).

(d) (No change from proposal).