


AUG 20 2009

**Township of Ocean
50 Railroad Avenue
Waretown, New Jersey 08758**

Honorable Robert J. Kraft, Mayor


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**Proposal to NJ Pinelands Commission
for Intergovernmental Agreement by the Township of Ocean to
Install a Solar Photovoltaic Generation System**

- 1. A description of the project and at least a conceptual site plan. The project description and site plan must address both short term and long term development plans for the site.*

The Township of Ocean (Township) landfill located adjacent to Wells Mill Road within the Township of Ocean consists of two (2) disposal areas – a 50 acre unlined landfill and a 12 acre lined landfill. Solid wastes were not accepted after the year 1988, and the landfill was closed completely in compliance with the NJDEP landfill closure regulations in August 2004. The 50 acre unlined landfill has a cap consisting of a 40 mil geomembrane layer covered with an 18 inch sand drainage layer which is covered with a 6 inch vegetated topsoil layer with hay and mulch. Landfill gas is vented through a series of individual vent stacks. The 12 acre lined landfill is capped the same as the 50 acre site but has a landfill gas collection and flare system in lieu of individual vent stacks.

The proposed project is a Solar Photovoltaic Generation System (Solar System) which will convert sunlight which falls upon the landfill into useful electricity. The Solar System will be composed of solar panels located atop three (3) different sections of the landfill utilizing approximately 22 acres of the landfill cap. An aerial view of Township of Ocean landfill and the locations of three proposed solar arrays are shown below:



Aerial view of the Southern Ocean Landfill

The proposed layout for the Solar Photovoltaic Generation System is shown below:



Layout of the Proposed Solar Photovoltaic Generation System at the Southern Ocean Landfill

The design of this solar photovoltaic system envisages utilization of fixed ground mounted, polycrystalline photovoltaic (PV) modules. The proposed system design maximizes the environmental and economic benefits to the Township while taking optimum advantage of the available ground area designated for this System.

This solar PV system is rated at 5.675 MW and is projected to produce 7,189,076 kWh of clean renewable energy during its first year of operation. Annual system degradation is estimated to be 0.5% on initial year energy production. The proposed Solar System would be designed, constructed, owned, operated and maintained by Pepco Energy Ocean Solar, LLC, through a 15 year lease agreement. Pepco Energy would compensate the Township by making monthly lease payments to the Township for the term of the contract for the use of the land below the Solar System.

Pepco Energy has selected among the best available commercial technologies for the system components including: Suntech STP 200 24 Ub-1 PV solar modules rated at 200 watts DC STC; Conergy Solar Giant III module mounting system; and Satcon 500 kW inverters. The solar PV modules will be mounted on the Solar Giant III mounting systems. The module mounting systems will be installed on the flat areas of the landfill site using ballasts and without penetrating the landfill cap. The solar modules will be installed at 20° tilt with respect to the horizontal axis, with an Azimuth of 180° (0 degrees true north) to maximize system size and electric output.

The Solar System will deliver DC power to eleven (11) 3-phase, 500 kW power inverters. The 208 V AC power output from the inverters will be stepped up to 12.47 kV using four (4) 208 V-12.47 kV, 1,000 kVA liquid filled transformers, each equipped with two (2)

isolated 208 V windings, one for each inverter, and one (1) 12.47 kV winding and three (3) 208 V-12.47 kV, 500 kVA liquid filled transformers each equipped with one (1) 208 V winding and one (1) 12.47 kV winding. Each transformer package will include a built-in AC disconnect and fused switch. The two (2) 1,000 kVA and two (2) 500 kVA transformers will distribute power into one (1) separate 12.47 kV substation which will tie into the existing utility electrical distribution system. Atlantic City Electric will make the necessary upgrades required to connect to the onsite 12.47 kV substation. When sufficient sunlight is present, the Solar System is energized and will supply clean renewable energy to the utility electrical distribution system. The combiners, inverters, disconnects and step up transformers will be housed on skids in close proximity to solar arrays while the one (1) skid mounted substation would be located near the Wells Mill Road landfill entrance. All of the power generated from the Solar System will feed into the utility electrical distribution system and will be sold to the PJM market at wholesale rates.

Technical parameters of the three proposed solar PV arrays are shown below:

| Parameter | Array A | Array B | Array C |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Array Size (STC DC) | 3,675.0 KW | 441.0 KW | 1,512.0 KW |
| Array Tilt | 20° | 20° | 20° |
| Array Orientation | 180° (North =0°) | 180° (North =0°) | 180° (North =0°) |
| PV Module (Manufacturer) | Suntech | Suntech | Suntech |
| Quantity | 18,375 | 2,205 | 7,560 |
| Power Output | 200 watts (-3% / +3%) | 200 watts (-3% / +3%) | 200 watts (-3% / +3%) |
| Inverter Manufacturer | Satcon | Satcon | Satcon |
| KVA Rating | (7) 500 KVA | (1) 500 KVA | (3) 500 KVA |
| Mounting System | Conergy SolarGiant III | Conergy SolarGiant III | Conergy SolarGiant III |
| DAS System | Fat Spaniel | Fat Spaniel | Fat Spaniel |

Technical parameters for the proposed three solar Arrays

The inverters would be located outdoors on a crushed stone foundation in close proximity to solar arrays and the substation would be located near the entrance of the landfill site. With the exception of the proposed photovoltaic array C, the only site disturbance will be associated with the installation of utility poles along the landfill road. For the photovoltaic array C area, minor grading and leveling will be necessary. An erosion control and sediment control plan will be prepared for the photovoltaic array C area.

The development activities mentioned above are proposed to be completed in a span of about six months from the actual date of beginning of project construction which will occur only after obtaining all the necessary clearances and permits. Upon completion of the project, Pepco Energy will be responsible for the maintenance of the Solar System on the site over the duration of the lease. However this does not entail any kind of development activity. Apart from the short term project development activities detailed above, no other plans for development are made for the Township of Ocean landfill either in the short term or over the long term.

2. *If the project site is part of a larger tract of land, a description and at least a conceptual site plan illustrating any existing and future development and management plans for the remainder of the tract. (Ocean from recent survey)*

The entire property in question is shown on the Tax Map of Ocean Township as Block 6, Lot 4.01 consisting of 193.60 acres and Block 7, Lot 1 consisting of 101.2 acres. The proposed solar system is projected to encompass approximately 22.0 acres of property, all contained within Block 7, Lot 1.

The entire tract of land is covered by a Consent Decree which was filed in the Superior Court of New Jersey on June 25, 2007. (See Attached Exhibit A) The Consent Decree was a result of litigation known as New Jersey Department of Environmental Protection, et al. v. Southern Ocean Landfill, Inc., et al. Docket No. OCN-L-003965-97 and New Jersey Department of Environmental Protection et al. v. Joseph Caldeira, Jr., et al. Docket No. OCN-L-001329-99.

As part of the litigation, Southern Ocean Landfill, Inc. (SOLI) agreed to impart a deed restriction on the property. Specifically the restriction is imposed in a Deed dated May 19, 2000 between the SOLI and SOLI recorded in the Office of the Ocean County Clerk on June 8, 2000 at Book 10117, Page 02249. The restriction is as follows:

“on the portions of the subject property that have not been used for waste disposal or improvements associated with the management of the landfill, shall remain undeveloped and vacant. Only low intensity recreational uses are permitted on this land, and this land shall not be used as a dilution area for any septic system.”

The Consent Decree contains a provision for the donation of Block 6, Lot 4.01 of the property to the State of New Jersey pursuant to a Land Transfer Agreement (LTA). Although the time frames contemplated in the LTA for the property have not been met, Ocean Township has recently been actively involved in working with the necessary parties to effectuate said transfer. As a predicate to said transfer however, the NJDEP is requiring the southerly lot line of Block 6, Lot 4.01 be relocated to the North outside of the active landfill/waste disposal area. As such, Ocean Township has entered into Agreement with SOLI to bring a minor sub-division application before the Township Land Use Board. The Township will proceed with that

application once it has received the necessary Certificate of Filing from the Pinelands Commission. (See Attached Exhibit B)

Upon completion of the subdivision and recording of the final plat, new lot 4.05 will be deeded by SOLI to the State of New Jersey as required by the referenced LTA. Lot 4.05 will be subject to the deed restriction contained in the aforementioned deed.

It is expected that the remaining property, Block 7, Lot 1 will be transferred by SOLI to the Township under a separate written agreement, or by foreclosure, upon authorization of the Governing Body. This property will also be subject to the restrictions as recited in the Consent Decree at Page 10, Section VII. 8. This requires that concurrent with the transfer of Lot 4.05 to the State of New Jersey, an additional deed restriction “on each parcel of real property that was used for landfill purposes or on which contamination has come to be located prohibiting any use of these properties for recreational, education, or residential purposes; prohibiting use of the ground water under the Site; and requiring appropriate engineering and institutional controls that will prevent any future exposure to, or release of hazardous substances at or from the Site.”

The Township, in conjunction with the County of Ocean, will continue the post closure maintenance and monitoring of the landfill areas as provided in the Consent Decree. The Township is not aware of any other development plans currently proposed for the remainder of the tract.

3. *A detailed description of the need for the project and the public purposes it will serve.*

The Southern Ocean landfill stopped accepting solid wastes in the year 1988 and was completely closed in compliance with the NJDEP regulations in Aug 2004. This significant expanse of brown field area has not been of any tangible use since the year 1988. It has remained an unproductive space for over 21 years generating no financial or environmental benefits to the Township. On the contrary, the landfill will continue to emit methane gas which is a highly potent greenhouse gas. Since the 50 acre landfill does not possess a methane gas flaring system, the gas produced by this portion of the landfill is released directly to the atmosphere. The 12 acre portion of the landfill has a methane flaring system, however carbon dioxide is produced as a product of methane combustion which is also a greenhouse gas. Apart from the millions of dollars of tax payers money spent on proper closure of this landfill, there is a need to ensure continuous maintenance of the closed landfill and the flaring system throughout their lifetimes – another significant financial burden on the Township. Presently, this landfill is not only a financial liability to the Township as well as the County of Ocean, but also has significant negative impacts on the environment due to emission of greenhouse gases like methane and carbon dioxide thereby contributing to global climate change.

state of NJ, but will also contribute to the efforts to boost the national economy during our present economic recession.

- ***Support to Solar Industry:*** Even though sunlight is a clean, free and renewable source of energy, many potential solar energy projects are not financially attractive compared to other conventional technologies. Clearly, economies of scale must be achieved to make this universally available renewable source of green energy economically viable for all. The significant investments envisaged under this 5.675 MW Solar Photovoltaic Generation System will contribute to the development of the solar energy industry within the County of Ocean, New Jersey and beyond.
- ***Setting Example for Safe and Beneficial Use of Closed Landfills:*** Successful completion of this Solar Photovoltaic Generation System will demonstrate the safe and beneficial use of closed landfills. The potential environmental and economic benefits achieved by a cascading effect to other landfills throughout New Jersey and beyond are immense.

Closed landfill sites are deemed unfit for most types of beneficial economic and environmental activities. The only viable alternative to the proposed renewable energy project at of the Southern Ocean Landfill is to maintain the status quo – where in the landfill will continue to be a financial burden to its owner throughout its life span while continuing to emit greenhouse gases (i.e. methane and carbon dioxide) into the atmosphere contributing to global climate change. Clearly the proposed Solar Photovoltaic Generation System creates many tangible environmental, economic and social benefits compared to maintaining status quo. Not only will these environmental, economic and social benefits be sacrificed by maintaining status quo at the Southern Ocean landfill but will also result in a lost opportunity to shift away from fossil fuel generated electricity and towards a clean, green and renewable source of energy.

In addition to the above, the acquisition of the property by the Township will extinguish outstanding tax liens, satisfy an outstanding mortgage made by SOLI to the Township, resolve outstanding sewer charges from the Ocean County Utilities Authority and fulfill the requirements of the Consent Decree.

4. A list of public agencies and non-governmental organizations that have been consulted regarding this project and information about their views or recommendations about the project.

- Office of the Governor of New Jersey:

Discussions were held with the Chief Energy Advisor to the Governor along with the representatives of the Pinelands Commission, New Jersey Department of Environmental Protection (NJDEP), Ocean County, International Brotherhood of

The proposed 5.675 MW Solar Photovoltaic Generation System would utilize approximately 22 acres of space on this closed landfill. It is estimated that the project would generate clean and green renewable energy in the amount of 7,189,076 kWh during its initial year of operation. The project would be designed, constructed, owned, operated and maintained by Pepco Energy through a 15 year lease agreement. Pepco Energy would compensate the Township by making annual land lease payments to the Township for the term of the lease. Pepco Energy has offered the following three options to the Township upon expiration of the 15 year lease agreement: (i) continuation of the lease agreement at mutually agreeable lease amount; (ii) sale of the Solar Photovoltaic Generation System to the Township at fair market value; or (iii) termination of the lease and removal of the Solar Photovoltaic Generation System from the landfill at no cost to the Township. Clearly, this renewable energy project will result in significant revenues to the Township which can be used to offset other Township expenses including landfill maintenance costs or mitigation of future municipal tax increases.

Apart from the financial benefits to the Township, significant environmental benefits can be realized through this Solar Photovoltaic Generation System. It is estimated that the proposed Solar PV System will help to achieve the following emissions reductions (in kg/year) compared to conventional fossil fuel based power generation:

- Carbon Dioxide CO₂: 6,363,194
- Nitrogen Oxides NO_x: 2,815
- Sulphur Dioxide SO₂: 3,124
- Particulates: 395

Apart from these financial and environmental benefits the proposed project will result in a number of benefits to the public as mentioned below:

- ***Brown Site Utilization:*** The currently useless landfill area will become a productive site and will generate renewable energy.
- ***Educational Benefits:*** Through the web-based monitoring system and potential site tours of the Solar Photovoltaic Generation System (within the context of the deed restriction), Township citizens and school students can learn more about the virtues and benefits of solar energy.
- ***Electric Utility Improvements:*** By installing a Solar Photovoltaic Generation System at 5.675 MW upon the landfill, the utility distribution system currently supplying electricity to the landfill will be improved. These distribution system improvements will also help areas in and around the landfill.
- ***Green Job Creation:*** At 5.675 MW, the proposed Solar Photovoltaic Generation System will result in millions of dollars worth of investments. This will not only lead to creation of large number of green jobs within the

Electrical Workers (IBEW) and Pepco Energy Services concerning the implementation of the proposed Solar Photovoltaic Generation System. The Chief Energy Advisor facilitated discussions between all aforementioned concerned parties in an effort to expedite the development and potential implementation of the Solar Photovoltaic Generation System as well as a similar proposed solar energy project atop a closed landfill in Lumberton Township, NJ.

- New Jersey Department of Environmental Protection (NJDEP):

Discussions were held with the representatives of NJDEP along with the representatives of the Governor's Office, Attorney General, Pinelands Commission, Ocean County, Pepco Energy Services and IBEW. The NJDEP representatives have provided information about the process involved and the time required to obtain a landfill closure modification permit.

- Pinelands Commission:

Discussions were held with the counsel of the Pinelands Commission along with the representatives of the NJDEP, Governor's Office, Ocean County, IBEW and Pepco Energy. The preliminary views of the Pinelands Commission regarding the admissibility of the proposed Solar Photovoltaic Generation System would only be known upon submission of a proposal from the Township of Ocean to the Pinelands P&G Committee and their subsequent review of the project proposal. A Senior Counsel of Pinelands Commission has provided information and advice regarding the process involved in amending an existing Memorandum of Agreement (MOA).

- Township of Ocean:

The Township of Ocean desires to have a Solar Photovoltaic Generation System implemented on their closed landfill for the purpose of gaining environmental and economic benefits derived from the generation of renewable energy. Pepco Energy Services was selected by the Township to develop, design, operate and maintain a Solar Photovoltaic Generation System through a competitive bidding process which occurred earlier this year.

The Township views this project as an opportunity to convert the otherwise useless landfill site into an environmentally and economically beneficial asset. The Township is supportive of the proposed Solar Photovoltaic Generation System and is facilitating the process of deed transfer from the private owner of the landfill to the Township of Ocean which will help expedite other necessary permitting.

- Township of Ocean Land Use Board:

A minor subdivision application will be submitted to the Township Land Use Board in order to redefine the lot lines as previously outlined. Subsequent to receiving other outside agency approvals a major site plan application will be submitted to the Land Use Board. The Land Use Board shall provide a “courtesy review” of both applications as provided for in the Municipal Land Use Law as the Township of Ocean will be the Applicant.

The Township expects the Land Use Board will not have any objections to the subdivision or Solar Project.

- Ocean County:

Ocean County (County) is aware that time is of the essence in attempting to place the proposed Solar Photovoltaic Generation System in service by December 31, 2009. The County is concerned with the impact the Solar Photovoltaic Generation System may have on the landfill liner and storm water drainage system. The County and its engineering consultant (Hatch Mott MacDonald) are willing to expeditiously review any detailed engineering plans for the Solar Photovoltaic Generation System layout as soon as they are provided to the County. The County has also performed a site visit to the Pennsauken (NJ) Landfill to obtain a first-hand look at a closed landfill with solar panels installed upon it. The County anticipates the potential recovery of a small portion of the funds it invested for the proper closure of Ocean Township landfill through an agreement with the Township.

The County has also expressed its willingness to consider entering into an interagency agreement with the Pinelands Commission and other affected parties once the title of the landfill is secured by the Township of Ocean which is a necessary requirement for the potential modification of the existing Memorandum of Agreement with the Pinelands Commission that governs the permitted use of the landfill site.

- Ocean County Utilities Authority:

The Ocean County Utilities Authority (OCUA) participated in a roundtable discussion of the project. The OCUA did not express any objection to the project and views same as a potential to resolve outstanding sewer service charges owed by SOLI.

- The Atlantic County Utilities Authority

The Atlantic County Utilities Authority has been designated by the Township as its Renewable Energy Consultant.

- International Brotherhood of Electrical Workers (IBEW):

The IBEW is a non-governmental organization and represents approximately 725,000 members working in a wide variety of fields including utilities, construction, telecommunications, broadcasting, and manufacturing. The IBEW is supportive of the proposed Solar Photovoltaic Generation System and recognizes the project's potential to generate green jobs to New Jersey based electrical contractors particularly in the context of economic recession and recent large scale job losses. Representatives of IBEW have facilitated communication with various permitting agencies and the Office of the Governor.

- United States Congressman John Adler:

On August 7, 2009, Congressman Adler's office had advised us that "The Congressman wishes to be of any assistance to help shepherd the project in the right direction."

5. *The status of project financing, including an estimate of costs and preliminary or firm funding commitments.*

The solar system will be developed, owned, financed and operated by a wholly-owned, special purpose subsidiary of Pepco Energy Services, Inc. (the "Solar SPE"). This entity will not only own and operate the solar system, but will also be the contracting party under various project agreements to sell into the PJM energy grid the quantities of electric energy generated from the Solar Photovoltaic Generation System as well as to sell any solar renewable energy certificates created in connection with operation of the Solar System. The Solar SPE will also be the lessee under a lease agreement with the Township of Ocean by which it will acquire the rights to construct and operate its Solar System at the landfill.

Pepco Energy Services estimates that a total investment of approximately \$39,672,534 will be required to develop, engineer, design, permit, procure, construct, and place the Solar Photovoltaic Generation System in commercial operation. This includes all project related soft costs as well as hard costs.

The required project funding may be provided to the Solar SPE from a variety of available sources currently being evaluated. These include both intercompany debt and equity contributions from the Solar SPE's corporate parents as well as debt or equity from third party lenders/investors. Pepco Energy Services will pursue third party sources of financing based on capital market conditions and its ability to obtain satisfactory terms may assume a variety of possible forms and structures, ranging from a project loan agreement secured by a first-priority security interest in the plant assets and contract rights to a capital lease arrangement. It is most likely that the SPE's parents will provide 100% of the project funding, but seek to refinance some or all of its investment following commercial operation depending on capital market conditions. Regardless of the final structure and subject to the satisfaction of various

project milestones, Pepco Energy Services will, with the support of its public parent Pepco Holdings, Inc. (POM), underwrite 100% of the initial project capital requirements.

POM possesses the financial resources required to finance all necessary project costs solely from its internal sources. Pepco Energy Services is a member of the consolidated group of utility and unregulated energy companies which are wholly-owned by POM.

Pepco Energy Services is an indirect, wholly-owned subsidiary of POM. POM was formed on August 1, 2002 with the merger of Potomac Electric Power Company and Conectiv. This merger resulted in the creation of a system of utility and unregulated companies and a consolidation of various businesses that had existed independently prior to the merger. Headquartered in Washington, D.C., POM is the publicly traded parent of a consolidated group of electric utility and competitive energy subsidiaries, which includes Pepco Energy Services. POM is listed on the New York Stock Exchange and is a member of the S&P 500. Its financial information is available on "EDGAR" or its home page on the World Wide Web at www.pepco.com. Its total assets exceed \$14 billion. Through its subsidiaries Pepco, Delmarva Power and Atlantic City Electric, POM delivers regulated electric and natural gas distribution service to about 1.9 million customers in Delaware, the District of Columbia, Maryland, and New Jersey.

POM's competitive businesses are comprised of a wholesale and retail segment. The wholesale businesses are conducted through Conectiv Energy Holdings, Inc. and its subsidiaries, which own and operate 4,182 MW of merchant electric generation capacity in the Mid-Atlantic and New England markets and are engaged in energy trading and supply procurement and management activities as well. Pepco Energy Services is POM's entity for conducting competitive, retail energy services throughout much of the eastern seaboard of the U.S.

With a staff of over 450 employees, Pepco Energy Services and its subsidiaries own and/or operate cogeneration plants, district heating and cooling facilities, renewable energy production facilities, and thermal storage, including its district heating and cooling business in Atlantic City. Pepco Energy Services and its subsidiaries can offer its customers a wide range of specialized services, including performance contracting, integrating power and thermal energy plants, operations and maintenance, and fossil fuel and electricity procurement. It is the fourth largest retail electric energy supplier in the nation.

6. ***The status of project planning and design work. At a minimum, a preliminary assessment of wetland, rare plant and rare animal resources that may exist on the tract must be included.***

In anticipation of future development of the subject property, on February 10, 2000 the Township Committee, by Resolution 2000-80, declared the Southern Ocean

Landfill Facility Area an area in need of redevelopment in the municipality. (See Attached Exhibit C)

The initial planning and design phase for the Solar Project has been completed as outlined in this submittal. PEPCO has taken the lead in the engineering for the design of the solar array, site specifications, site layout and coordination with Atlantic City Electric for the interconnection with the Power Grid. The initial plans are currently being reviewed by the County of Ocean and their engineering Consultant Hatch, Mott MacDonald.

The Solar Project is designed to be constructed on the landfill face and within the footprint of previously disturbed areas. No additional disturbance outside the footprint is planned. The Township has been advised that during the landfill closure permit process, there was no submittal required in regards to wetland assessments and rare plant or rare animal resources. As such, at this time the Township requests a waiver from any requirements to conduct a wetland assessment and survey of rare plants and rare animal resources.

7. *A detailed listing of CMP land use and development standards that can not or likely will not be met and why they can't be met.*

The subject property is located within the Pinelands Management Area defined as a Forest Area. The Goals and Objectives of the Forest Area are outlined in the CMP at 7:50-5.13(b) which states that these “undisturbed, forested portions of the Protection Area support characteristic Pinelands plant and animal species and provide suitable habitat for many threatened or endangered species.” Further, the CMP states that although the overall type and level of development must be strictly limited, some parts of the Forest Areas are more suitable for development than others provided that such development is subject to strict environmental performance standards.”

As stated previously, the area of the subject property to be utilized for the Solar Project has previously been cleared and disturbed for the Landfill operations. No additional disturbance is proposed and as such the project is not inconsistent with the Goals and Objectives as set forth above.

The minimum standards governing the distribution and intensity of development and land use in the Forest Area are as prescribed in N.J.A.C. 7:50-5.23.

The Township of Ocean is making this submittal in order to have the Commission consider entering into an Intergovernmental Agreement for the re-development of the closed Southern Ocean Landfill as a Solar Photovoltaic Generation System. This is not a permitted use as defined within the regulations. The Township of Ocean is seeking to enter into the aforesaid intergovernmental memoranda of agreement with the Commission for this development activity which is not fully consistent with the provisions of N.J.A.C. 7:50-5 and 6. The Township believes that through its submittal to the Commission, it demonstrates that the variation from the standards of

the CMP will, at a minimum, afford an equivalent level of protection to the resources of the Pinelands than would be provided through a strict application of the standards.

The Township does not believe that it is in the best interest of the Public and Taxpayers to develop low intensity recreational use at the former Landfill. The Township considers the proposed use of the site in the best interest of its residents, taxpayers and visitors from a public health, safety and welfare perspective.

The Township believes that an adequate development standard for the proposed use may be drafted and implemented for the subject property on a site specific basis. The particular standards may be incorporated into the intergovernmental memorandum of agreement with the Commission.

8. *A description of design measures to be taken to reduce the extent of the project's non-conformity with CMP standards.*

Since the proposed Solar Photovoltaic Generation System design specifies the installation of solar photovoltaic panels atop of the closed landfill with no penetrations of the landfill cap, there are limited instances of non-conformity with the Pinelands Commission Comprehensive Management Plan (CMP).

Listed below are the known and potential non-conformities with the CMP standards along with the design measures contemplated to reduce the extent of non-conformity.

1) Known non-conformity:

The proposed Solar Photovoltaic Generation System is in non-conformity with the Minimum Standards for Land Uses and Intensities (Subchapter 5 Part III). The standard under clause 7:50-5.23-6 of the CMP provides that land in Pinelands Preservation Area can, under specified conditions, be used for "low intensity recreational use". The development of a solar energy system is not specified as a permitted land use and hence the proposed Solar Photovoltaic Generation System is in non-conformity with the Minimum Standards for Land Use.

Design Measures for Mitigation:

The proposed use of the Pinelands area is clearly different than the permitted use and the same cannot be remedied by project design modifications of any fashion. The proposed use of the land fill requires a waiver by the Pinelands Commission to clause 7:50-5.23-6 of the CMP. Pepco Energy Services would work with the Township of Ocean to facilitate the execution of inter governmental agreement between the Pinelands Commission, Ocean County and the NJDEP to obtain waiver to the proposed deviation.

However, despite the deviation in proposed land use, Pepco Energy Services has designed the project to ensure minimum impact on the closed landfill as well as the Pinelands environment. The solar photovoltaic panels will be supported using ballasted panel mounting systems and there will be no penetration of the landfill cap. The project will not require use of motorized transportation except for necessary transportation during project construction phase and for periodic maintenance / inspections of the panels or for trouble shooting purposes. The project does not involve clearing of vegetation or ground cover. Furthermore, the solar system design allows continued growth of vegetation after the installation solar panels.

2) Potential Non-conformity:

The proposed Solar Photovoltaic Generation System could potentially be in non-conformity with the requirement under clause 7:50-5.23-6 (V) of the CMP, which requires that the low intensity recreational use shall not have more than one percent of the parcel covered with impervious surfaces.

As noted earlier, the proposed use of the landfill is entirely different from the recreational use specified in the standard under clause 7:50-5.23-6 of the CMP. The issue is contingent upon whether the Pinelands Commission considers solar photovoltaic panels to be at par with other impermeable surfaces. If solar photovoltaic panels do not fall within the purview of the definition of “Impermeable Surface” given in the CMP, then this potential non-conformity may become a non-issue.

Design Measures for Mitigation:

If deemed necessary by affected parties, Pepco Energy Services would investigate the need for any revisions to the storm water management plan currently implemented and maintained by Ocean County.

3) Potential Non-conformity:

The clause 7:50-5.1 (c) of the CMP, states that “Unless expressly permitted in a certified municipal land use ordinance no more than one principal use shall be located on one lot ...”

The proposed Solar Photovoltaic Generation System is to be located on a closed landfill which has stopped accepting solid wastes since the year 1988. Since the landfill currently has no principal use, the potential use of lot to generate renewable energy via a Solar System would become the lots only principal use.

Design Measures for Mitigation:

Since the landfill has ceased accepting solid wastes for over 21 years, the site is currently not being used for any principal purpose. The only activity currently occurring is the flaring of landfill gas on the 12 acre landfill section. The proposed Solar Photovoltaic Generation System is located a significant distance from the existing flaring system and will no impact the flaring activity whatsoever.

9. A detailed listing of other CMP development standards for which insufficient information is currently available to assess the project's conformance.

As stated in Section 7 and 8 above there are no CMP development standards for the proposed Solar Project and as such there is no conformity to measure.

10. A description of project alternatives [other locations for the project and other onsite designs] that were considered and why they weren't pursued.

The Township in conjunction with its consultant the Atlantic County Utilities Authority had considered the installation of Solar Arrays at the Municipal Complex on the roof and also as an "auto canopy" in parking areas. It was determined that there is not adequate land space to accommodate the project as proposed.

11. The specific measures that are proposed to provide an equivalent or better level of protection of the Pinelands than would be achieved if the CMP's standards were strictly followed. These may include one or more environmental initiatives, including the protection of land elsewhere and the remediation of environmental impacts on this tract or elsewhere.

The only known non-conformity is the proposed utilization of the landfill site for non-permitted use (Clause 7:50-5.22-6 of the CMP). As noted earlier, the proposed renewable energy project would result only in positive environmental and economic benefits and no negative impacts what so ever on the Pinelands environment.

With the proposed subdivision, the State of New Jersey would acquire title to approximately 169 acres of undeveloped forest area. That area will remain undeveloped and vacant with only low intensity recreational uses permitted on the land as per the deed restriction. The Township of Ocean would regain title to the remaining parcel from the control of a private corporation. The Township is requesting to "partner" with the Pinelands Commission in the redevelopment of this parcel by entering into an Intergovernmental Agency Agreement, subject to site specific development regulations.

The project design ensures that the Solar Photovoltaic Generation System does not interfere with the landfill or the Pinelands environment. Since the proposed project would be located on top of a closed landfill, an otherwise useless site, there would be no degradation in the level of protection to the Pinelands. To the contrary, the

renewable energy produced by the proposed Solar Photovoltaic Generation System would have significant environmental benefits in the form of emissions reductions estimated at the levels shown below (kg/year):

| | |
|-----------------------------------|-----------|
| Carbon Dioxide CO ₂ : | 6,363,194 |
| Nitrogen Oxides NO _x : | 2,815 |
| Sulphur Dioxide SO ₂ : | 3,124 |
| Particulates: | 395 |

Strict adherence to the CMP standards would allow the landfill site to be used only for a low intensity recreation facility. Development and maintenance of such a recreational facility would most likely require a significant financial burden upon the Township and would likely exclude the opportunity of the emissions reductions achievable from the Solar Photovoltaic Generation System. Furthermore, the landfill will continue to release significant amounts of landfill gas (methane and carbon dioxide) in to the atmosphere which will be detrimental to the environment.

In this case, it appears that the proposed deviation from CMP standards is more beneficial to the environment and that there are no negative environmental impacts on the landfill tract that would require remedial actions. However, Pepco Energy Services would be open to take guidelines from the Pinelands Commission regarding any environmental remediation requirements in the event the Pineland's Board of Commissioners determines one is required.