



October 9, 2018

Town of Goshen Planning Board
41 Webster Ave
Goshen, NY 10924

Re: Glenmere Lake Solar

Dear Chairman Bergus,

Community Energy Solar (“Community Energy” or “CES”) is pleased to submit the Site Plan Application for Glenmere Lake Solar LLC. Please find seven copies of the plan set enclosed along with the following:

Checks made payable to the Town of Goshen were submitted for the following amounts:

- Glenmere Lake Solar LLC
 - o \$9,191.60 for Site Plan Application Fee
 - o \$4,595.80 for Escrow (this payment came in two separate checks: A \$2,000 check and a \$2,595.80 check)

Community Energy Solar is continuing to further the design of this project, and looks forward to working with the Planning Board on a site plan that is in accordance with the Town’s requirements.

Community Energy has hired LAN Associates to prepare the Site Plan Application.

As soon as the Planning Board meeting agenda allows, we request that the Town of Goshen Planning Board declare its intent to serve as Lead Agency for SEQR review, and to approve Notice of Intent letters to be sent to the appropriate agencies regarding the Board’s intent to serve as lead agency. We are additionally seeking to hold a public hearing for the project at the earliest appropriate Planning Board meeting.

We appreciate any guidance you can provide. If you have any other questions, comments, feedback or concerns, you can contact us using the information below.

Sincerely,

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Glenmere Lake Solar LLC – Project Summary

Community Energy Solar (CES) is proposing a 2 MW-AC Community Solar Farm in Orange County, New York. CES began developing the project in 2015 with a vision of bringing Community solar power to New York. This solar farm will safely generate enough clean, electricity to power approximately 500 New York households.

The project will be constructed on approximately 20 acres of a 129 acre parcel, located at 1199-1249 Pulaski Highway, Goshen, NY 10924. CES is leasing land from a single landowner, providing a consistent revenue stream for the life of the project, in excess of typical farm income. The site plan can be found in Exhibit A.

CES will use the same type of photovoltaic panels installed on over one million homes in the US. Solar equipment is proven safe in applications from fields to rooftops of homes, schools and businesses. Panels will be installed on a low-profile racking system with no concrete footers. The project leaves no trace, so land can be returned to agricultural use at the end of its life. Setbacks, agricultural-style fencing, and landscape buffering enable solar projects to blend into the community.

The Facility will consist of the following components:

- A solar field of approximately 8,000 PV panels mounted on a Single-Axis-Tracker or fixed tilt racking structure;
- An electrical collection system that will aggregate the output from the PV panels and inverters that convert the electricity from direct current (DC) to alternating current (AC);
- A generation tie line (gen-tie) will connect the Facility to the electric utility system at the point of interconnection (POI);
- Internal infrastructure including access roads and fencing; and
- Temporary laydown areas for equipment storage during construction.

To deliver power to residential electric customers, Glenmere Lake Solar LLC proposes to interconnect into an existing 13.2 kV distribution line, which is operated by Orange & Rockland Utility. The POI is at an existing 13.2 kV distribution line pole located along Pulaski Highway in the Town of Goshen, south of the Facility Area.

In November 2015 the Applicant filed for interconnection of 2 MW (AC) with Orange & Rockland Utilities. The initial Feasibility Study and Coordinated Electric System Interconnection Review are complete. The Feasibility Study and The Coordinated Electric System Interconnection Review both indicate that there will be some electrical system impacts from a 2 MW injection into the 13.2 kV line, meaning that there will be costs to interconnect the Facility. This is not uncommon and the project will be financially viable with the estimated interconnection costs.

The Glenmere Lake Solar Project will have a nameplate capacity of up to 2 MW (AC) and is expected to generate approximately 4,000 MWh of energy for year one of operation. This will be enough electricity to meet the average annual consumption of approximately 500 New York households, based on average annual electric consumption of 7.2 MWh for New York State (EIA, 2014).

Special Use Permit and Site Plan Approval Criteria

Applicable regulations of Chapter 97-55 in the Goshen Town Code (solar regulations)

E.1 A minimum lot size of 10 acres is required.

The parcel size is 129.2 acres.

E.2 The minimum distance between any portion of a solar or photovoltaic energy facility and a street shall be 100 feet and the minimum distance from any other property line shall be 100 feet.

100 foot setbacks are reflected on the site plan

F.1 The installation of any wind, solar or photovoltaic energy system, including any accessory equipment, shall be outside any land area exhibiting sensitive environmental characteristics such as fresh water wetlands, one-hundred-year flood hazard areas, severe topography (slopes more than 15%), stream corridors, wetland transition areas, habitats for endangered, rare, or threatened species, historic and/or culturally significant areas. Systems shall not be within any conservation easement or conservation deed restricted area. Systems that are proximate to airfields shall be demonstrated to be in compliance with all regulatory requirements of such airfield operations including those related to agricultural operations. Potential developers of solar and wind systems should be aware of agricultural operations in the area and potential issues on their intended operations from dust from soil cultivation, trucking, crop dusting and other agricultural operations.

The solar array is not located on the above mentioned environmentally and ecologically sensitive areas or severe slopes (>15%). These areas are identified on the site plan and the proposed plan demonstrates avoidance of these sensitive areas. A small section of the access road and array fence will be located on areas of >15% slope.

F.2 Any proposal for a wind, solar or photovoltaic energy system shall conform to the provisions of Section 97-47 of this Chapter, entitled “Protection and Regulation of Agriculture” and Chapter 53 (“Clearing and Grading Control”), as well as the following:

The project shall adhere to the above provisions.

(a) Any trees and/or shrubs to be removed or topped to accommodate the installation of a wind, solar or photovoltaic energy system shall be accompanied by a site plan identifying the location, size and species of trees to be removed

The tree survey crew has been out to the site and is in the process of adding this information to the site plan. The Town will be provided with a copy of the tree survey, including the location, size, and species of impacted trees once the survey is complete.

(b) An applicant shall locate a wind or solar energy system so that tree removal is not required to the greatest extent practical. Where trees are to be removed, the Building

Inspector, Planning Board or Zoning Board of Appeals, as the case may be, may require the replacement of trees on the subject property at up to a one-to-one ratio, depending upon the consideration of environmental factors and the good judgment of the authority having jurisdiction. For the purposes of this review and potential replacement program, "trees" shall be defined as those having a six-inch diameter at breast height (dbh).

The proposed project has been designed to avoid tree removal to the greatest extent practical. Some trees will need to be removed. They are currently being surveyed and will be denoted on the site plan once the survey is complete.

- (c) The installation of any wind or solar energy system shall respect the landscaping and trees within any conservation easement or deed restricted area or within any required buffer area so that there is no damage or harm to the plant materials within those areas.**

The project will adhere to this regulation.

- (d) In any case, any tree clearing shall be justified with emphasis on development of previously cleared areas and any proposed clearing not to exceed an area more than 50% of the subject property's size. Clearing shall be minimized, and limited to the area necessary for site access and the installation and operation of solar panels and related equipment. Natural vegetation shall be maintained to the greatest extent practicable.**

The design minimizes tree clearing to the greatest extent practical. The proposed design for the project requires tree clearing on approximately 1.5% of the project parcel. Once the tree survey is complete, the results will be provided to the Town to demonstrate a minimal amount of tree clearing that is far less than 50% of the subject property's size. These areas are currently shown on the plan but the survey of individual trees to be removed is in process.

- (e) Once constructed, the ground cover below the solar or wind energy system must be restored with low-maintenance, drought-resistant, native, non-fertilizer dependent flora or other protective low-maintenance surface as the Town Planning Board may approve or, if no Planning Board approval is required, as the Building Inspector may approve.**

The project will adhere to this regulation.

- F.3 The design of a wind or solar energy system shall, to the extent possible, use materials, colors, textures, screening and landscaping that will blend into the natural setting and existing environment.**

The proposed project will be screened with existing natural vegetation. CES proposes to supplement the natural vegetation with an additional vegetative buffer as shown on the site plan.

- F.4 Wind and solar energy systems and any associated structures shall not be used for displaying any advertising or signage, except for reasonable identification of the operator of the system and appropriate warning signs, with phone numbers for ESO/emergency contacts all not to exceed, in aggregate, four square feet in area per 100 lineal feet of running perimeter. All signs shall be affixed to equipment unless otherwise authorized by the approving authority (Building Inspector or Planning Board).**

The project will adhere to this regulation.

- F.5 The installation of a clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.**

The project will adhere to this regulation.

- F.6 All solar and wind energy systems shall be designed and located in order to prevent any unabated reflective glare toward any inhabited buildings on adjacent properties as well as adjacent roadways with sufficient studies submitted to confirm this has been mitigated to the extent practicable.**

CES is evaluating two types of panel racking technologies, fixed-tilt and single-axis tracker, and has conducted a glare analysis for both scenarios. The site was analyzed using the Solar Glare Hazard Analysis Tool (SGHAT), an industry standard tool that has been validated by the FAA. This analysis is provided in Exhibit D. The analysis studies the potential for glare from seven fixed observation points chosen based on proximity and their likelihood of views to the project. Five observation points were chosen within the Remington Ridge residential subdivision along Valley View Road and Royal Vista Drive near where the subdivision abuts the project parcel. Two observation points were chosen along Pulaski Highway to the south of the project parcel.

The fixed-tilt SGHAT results for the five observation points located within the Remington Ridge neighborhood show some potential for glare for ~35 minutes during early mornings (5:40-6:15 AM) from April-October. The fixed-tilt SGHAT results for the two observation points located along Pulaski highway show no glare from one observation point and some potential for glare from the second observation point for ~25 minutes during evenings (5:35-6:00 PM) from May-September. There is no reported potential for glare from the single-axis tracker system.

Solar panels are designed to absorb as much sunlight as possible and the occurrence of glare requires the confluence of multiple factors including clear daylight weather, location of observation, time of observation, and clear line of sight. The SGHAT tool assumes a bare earth condition and does not factor obstacles that may obstruct observed glare, such as intervening topography, vegetation, and structures. These factors greatly reduce the possibility of observed glare at the proposed project site. The site is surrounded by existing trees, greatly limiting the possibility for glare and limiting view of the project in general. Unabated glare will be thoroughly mitigated from any vantage point given the location of the proposed project and the surrounding existing trees, which will be supplemented with additional landscape screening along the property boundary with Remington Ridge.

- F.7 Lighting of the pertinent structures shall be limited to that minimally required for safety and operational purposes, and shall be reasonably shielded from abutting properties.**

No lighting is proposed for the project.

- F.8 When a new driveway or road is required for access to the wind, solar or photovoltaic systems, the surface shall be either pervious pavement or gravel and shall be the minimum width to accommodate maintenance as well as emergency vehicles.**

As shown on the site plan, a proposed 15-foot-wide gravel access roadway is proposed. The proposed driveway starts at the location of the existing driveway onto the property on Pulaski Highway, meets with an existing farm road on the property and ends in the middle of the solar project area where the proposed equipment is located. This proposed gravel road is designed to according to the above requirements.

- F.9 All wind and solar energy system installations must be securely fenced. Fencing may be chain-link or other suitable fence acceptable to the Planning Board and consistent with this chapter.**

The project plans to install a 7-8ft fence around the project. See site plan for proposed fencing.

- F.10 All wind, solar and photovoltaic energy system installations must be performed by a qualified installer, and, prior to operation, the electrical connections must be inspected by the Town or other appropriate electrical inspection agency, as determined by the Town. In addition, any interconnection to the public utility grid must be inspected by the appropriate public utility.**

The project will adhere to this regulation.

- (a) All power lines from a wind, solar or photovoltaic energy system to onsite interconnection equipment shall be located underground and installed by a certified professional and must meet all applicable national, state, and local electrical codes.**

The project will adhere to this regulation, subject to the requirements of the utility at the point of interconnection.

- (b) The installation of any energy system shall conform to the National Electric Code.**

The proposed project will conform to the National Electric Code.

- (c) Wind, solar and photovoltaic energy systems that connect to the electric utility grid shall comply with Article 7 of the New York State Public Service Law and Section 68 if the plant is to generate more than 80 mw of energy as required by the electric utility servicing the property.**

The proposed project will not generate more than 80 MW. The proposed project size is 2 MW.

- (d) Systems shall be installed by a qualified installer as listed on the NYSERDA Approved Installers list with a North American Board of Certified Energy Practitioners (NABCEP) certified installer.**

The proposed project will be installed by a qualified installer in accordance with this requirement.

- F.11 When batteries are included as part of the wind, solar or photovoltaic energy system, the batteries require a charge controller and must be placed in a secure container or enclosure meeting the requirements of the New York State Uniform Fire Prevention Code when in use, and, when no longer used, the batteries shall be disposed of in accordance with the laws and regulations of Orange County and other applicable laws and regulations. Unless practically infeasible, the energy system shall be connected to the energy grid in lieu of stand-alone systems relying upon batteries to store excess power.**

In the event batteries are to be included as part of the energy system, the proposed project will adhere to this regulation.

- F.12 Landscaped vegetative screening shall be required, as well as fencing as may be determined appropriate by the Planning Board, between any ground-mounted solar collectors or any ground-mounted equipment for any energy system and adjacent properties and streets in accordance with the following:**

- (a) The overall purpose of the landscaped screening is to obscure or substantially buffer the view of the solar energy system year-round.**

The project will adhere to this regulation using existing natural screening supplemented with additional landscape screening along the Remington Ridge property boundary. With the existing natural screening, the project area is not visible from Pulaski Highway.

- (b) The landscaped screening shall be comprised of a minimum of one evergreen tree, at least six feet high at time of planting, plus two supplemental shrubs, all planted within each 10 linear feet of the area to be screened or such other equivalent and appropriate landscape solution as is acceptable to the Planning Board.**

The project will adhere to this regulation or propose an equivalent and appropriate landscape plan that is acceptable to the Town.

- (c) Existing vegetation may be used to satisfy all or a portion of the required landscaped screening.**

The project site is surrounded by substantial existing vegetation obscuring that obscures views from most vantage points around the property.

- (d) Any fencing shall be at least four feet but generally no greater than six feet in height, provided that any fencing higher than four feet shall be located in the rear yard and**

shall be set back at least 15 feet from any property line. Fencing shall provide security protection for the facility and may also provide screening of the facility for visual protection of neighboring properties. Fencing shall satisfy all NEC requirements as needed. Deer fencing of up to eight-feet is permitted but does not take the place of security fencing which must be of substantial construction [see § 97-55F(9)].

The project will adhere to this regulation.

F.19 Visual assessment

- (a) **Where applicable, the provisions of the Scenic Road Corridor Overlay District (SR) shall apply (see § 97-29).**

The project will adhere to all provisions of the Scenic Road Corridor Overlay District.

- (b) **For areas outside the SR District, a visual impact assessment shall still be prepared and at a minimum, shall include:**

(1) A viewshed analysis in order to determine locations where solar or wind power and appurtenant facilities may be visible.

A viewshed analysis can be found in Exhibit A, which includes three cross sections that show the view profile from both sides of the project, thus capturing six vantage points.

(2) Graphic representations of before and after views from key viewpoints located inside and outside of the Town, including but not limited to state highways and other major roads, state and local parks, other public lands, preserves and historic sites normally open to the public, residential developments and from any other locations where the site is visible to a large number of visitors or travelers.

The profile cross sections found in Exhibit A include vantage points from Pulaski Highway, as well as the neighboring residences to the north of the project. Intervening topography and vegetation is shown on the cross sections, along with the proposed solar project.

(3) Assessment of alternative designs and color schemes.

Solar projects consist of solar modules, which are composed of cells typically consisting of a blue to dark blue hue. The modules are mounted onto a metal racking structure, typically consisting of grey aluminum or grey steel. Pictorial representations of equipment can be found in Exhibit B. Two alternative fencing options are being assessed, one consisting of a woven wire agricultural fence and the other consisting of metal chain link.

(4) Assessment of the visual impact of the facilities from abutting properties and streets.

The visual assessment found in Exhibit A includes vantage points from abutting properties and streets.

(5) Appropriate mitigations, in terms of landscaping, berms, hedges, fences, grading and other forms of screening shall be provided as needed to limit visual impact.

A vegetative buffer is proposed in the corridor between the solar project and the neighboring homes to the north of the project.

Applicable regulations of Chapter 97-73 in the Goshen Town Code (Special Permit requirements)

B. Major project criteria. Before granting or denying a major project special permit, the Planning Board shall make specific written findings establishing whether or not the proposed major project:

- (1) Will comply with all land use district, overlay district, and other specific requirements of this chapter and other local laws and regulations and will be consistent with the purposes of this chapter and of the land use district in which it is located.**

The proposed project complies with all setbacks, land use district requirements, overlay district requirements, and all other local laws and regulations of the rural zoning district (RU).

- (2) Will not result in excessive off-premises noise, dust, odors, solid waste, or glare or create any public or private nuisances.**

The proposed solar project is composed of non-toxic material and once constructed will not create noise, dust, odors, or solid waste. Any limited potential for glare will be thoroughly mitigated by existing and proposed additional vegetation and no aspect of the project will create a public or private nuisance.

- (3) Will not cause significant traffic congestion, impair pedestrian safety, or overload existing roads, considering their current width, surfacing, and condition, and any improvements proposed to be made to them by the applicant.**

Beyond the construction process, the proposed solar energy system will create less traffic than a single-family home. Maintenance workers will visit only a few times a year for routine maintenance. The proposed project does not require improvements to existing roads, with the exception of improving the access from Pulaski Highway in accordance with Orange County requirements.

- (4) Will be accessible to fire, police, and other emergency vehicles.**

The active area of the project will be enclosed by a fence and gated for security purposes. Access codes to the gate will be provided to the Goshen Police Department, Goshen Fire Department, and Goshen emergency service providers. Vehicular access to the site is adequate for the use proposed and for emergency services.

- (5) **Will not overload any public water, drainage, or sewer system, or any other municipal facility.**

The project will not utilize any of the above municipal facilities.

- (6) **Will not materially degrade any watercourse or other natural resource or ecosystem or degrade the water quality or quantity of an aquifer.**

The construction of this project will minimize stormwater pollution and natural impacts to the greatest extent possible, in accordance with a Stormwater Pollution Prevention Plan. Operation of the facility will not impact any watercourse, aquifer, or other natural resource or ecosystem.

- (7) **Will be suitable for the property on which it is proposed, considering the property's size, location, topography, vegetation, soils, natural habitat, and hydrology, and, if appropriate, its ability to be buffered or screened from neighboring properties and public roads.**

The project was chosen to be placed at this location based on a variety of factors including proximity to electrical infrastructure, natural visual screening and buffering, and avoidance of wetlands and floodplain areas. The proposed solar system will be adequately screened from neighboring properties and public roads by topography, existing natural vegetation, and additional proposed landscaping.

- (8) **Will be subject to such conditions on operation, design and layout of structures, and provision of buffer areas as may be necessary to ensure compatibility with surrounding uses and to protect the natural, historic, and scenic resources of the Town.**

CES will be subject to any necessary conditions to ensure compatibility with surrounding uses and to protect the natural, historic, and scenic resources of the town.

- (9) **Will be consistent with the goal of avoiding strip commercial development and buffering nonresidential uses that are incompatible with residential use.**

The proposed solar project will have minimal effect upon the neighboring community. This proposed project is in compliance with Town of Goshen comprehensive plan and surrounding use in the vicinity.

- (10) **Will not adversely affect the availability of affordable housing in the Town.**

The proposed project will not adversely affect the availability of affordable housing.

- (11) **Will comply with applicable site plan criteria in § 97-75D.**

The proposed improvements will comply with the requisite site plan criteria.

- (12) If the property is in a residential district, will have no greater overall off-site impact than would full development of the property with uses permitted by right, considering relevant environmental, social, and economic impacts.**

The property is not located in the residential district.

Exhibit A: Site Plan

Exhibit B: Visual Examples of Project Components

Exhibit C: Glare Analysis

Exhibit D: Interconnection Agreement

Exhibit E: Decommissioning Plan