



September 13, 2022

Lee Bergus, Chairman & Planning Board
Planning Board
Town of Goshen
41 Webster Avenue, 1st Floor
Goshen, NY 10924

**Re: Owens Road Solar
Subdivision, Special Permit & Site Plan –Revised Plans
File # 10-1-10.22; Memo 83-22-022**

Dear Mr. Bergus,

We offer the following information in response to the project comment letter from Town Designated Engineer, Sean T. Hoffman, PE H2M Architects + Engineers, dated June 1, 2022. Comments are in *italic text* and responses are in **bold** text below. On behalf of New Leaf Energy we offer the following responses to aforementioned letter.

A. Materials Reviewed:

1. *Correspondence prepared by Arico Associates, Engineers, Land Planners & Consultants dated May 18, 2022¹;*
2. *Stormwater Memo Report prepared by Arico Associates, Engineers, Land Planners & Consultants dated April 2022;*
3. *Correspondence prepared by Shumaker Consulting Engineering & Land Surveying, D.P.C. dated May 12, 2022 regarding Small Whorled Pogonia;*
4. *Correspondence prepared by North Country Ecological Services, Inc. dated May 15, 2022 regarding Habitat Assessment and Tree Survey;*
5. *Sight Distance Plan and Photographs (Line-of-Sight Analysis) prepared by Arico Associates, Engineers, Land Planners & Consultants dated March 23, 2022;*
6. *Tree Mitigation Plan prepared by Saratoga Associates dated May 16, 2022;*
7. *Correspondence prepared by Barrett Energy Resources Group dated May 11, 2022 regarding Glare Study Update #2;*
8. *Photo Simulations prepared by Saratoga Associates (undated);*
9. *Exhibit – Overall Benefits prepared by Arico Associates, Engineers, Land Planners & Consultants last revised May 18, 2022;*
10. *Correspondence prepared by NYS Office of Parks, Recreation and Historic Preservation dated May 6, 2022;*
11. *SEQRA Full Environmental Assessment Form – Part 3 (undated/unauthored); and*



12. Plans prepared by Arico Associates, Engineers, Land Planners & Consultants consisting of the following:

<u>Sheet No.</u>	<u>Drawing Title</u>	<u>Last Revised</u>
T-1	Title Page	05/18/2022
C-1.0	Existing Conditions Plan	05/18/2022
C-1.1	Subdivision Plan	05/18/2022
C-2.0	Tree Clearing Plan	05/18/2022
C2.1	C-2.1 Tree Clearing Plan	05/18/2022
C-2.2	C-2.2 Tree Clearing Plan	05/18/2022
C-2.3	C-2.3 Tree Clearing Plan	05/18/2022
C-3.0	Layout and Materials Plan	05/18/2022
C-3.1	Landscaping Plan	05/18/2022
C-3.2	Signage Plan	05/18/2022
C-4.0	Grading and Erosion Control Plan	05/18/2022
C-4.1	Access Road Profiles	05/18/2022
C-4.2	Grading Plan	05/18/2022
C-4.4	Detention Pond Plan	05/18/2022
C-4.5	Detention Pond Plan	05/18/2022
C-5.0	Civil Details	05/18/2022
C-6.0	Cross Sections	05/18/2022

B. Review of Submitted Materials – This application requires review by the Town Board and Planning Board. We recommend you consult with Attorney Naughton regarding coordination and review responsibilities. Additionally, this application requires area variances from the ZBA (see below). The applicant provided responses to our previous comments which assisted with our review of the revised plans. Previous comments which are still applicable are repeated below.

1. Zoning –

- a) Use – Applicant proposes construction of a 10-megawatt (AC) solar energy facility consisting of ground-mounted solar photovoltaic (PV) modules/panels switchgear, transformers, underground and aerial power lines for the interconnection to the electrical distribution system. We believe this meets the definition of a large solar energy system under the Code² and may be considered a principal use in all zoning districts subject to major site plan approval by the Planning Board and special permit approval by the Town Board [§97-55E]. [Informational]. **Response: No response needed.**
- b) Subdivision - The plan shows the subdivision of the parcel into two (2) lots each with its own array. We understand the purpose of the subdivision is to comply with Public Service Commission requirements relative to the maximum system size on a lot. We understand the maximum system size is 5-megawatts (AC) which results in a 10-megawatt (AC) maximum from this site. [Informational]. **Response: No response needed.**
- c) Special Permit – In order to ensure the compatibility of uses with surrounding properties, the Town Code permits certain uses only upon issuance of a special permit. Prior to granting or denying a major project special permit, specific criteria listed in the Code [§97-73] which includes nuisances (e.g., noises, dust and odors), traffic and emergency service access are to be considered. The applicant previously submitted a revised Project Narrative addressing visual & noise, drainage, wastewater and water services. We have the following comments regarding traffic and access:

- The Code requires the applicant to confirm the project will not cause significant traffic congestion or overload existing roads [§97-73A(3)]. The applicant previously identified two (2) potential delivery routes: Cheechunk Road from the south and

Philipsburg Road from the north. Both roads are weight restricted [§89-19] except for local delivery. Due to horizontal alignment concerns along Philipsburg Road, we recommend all tractor trailers access the site via Cheechunk Road. The applicant has agreed with this recommendation; we suggest this be noted on the plans and made of condition of any action. Response: This requirement has been added to the plan set as recommended on sheets C-0.0, 3.0, and 3.2.

The Town Traffic Consultant previously recommended the plans be revised to include the sight triangles and the applicant commit to trimming vegetation within these areas to maximize sight distances from the proposed vehicle access roads. The applicant has provided a line-of-sight analysis consisting of photographs demonstrating stopping sight distances of at least 330-feet from all directions. We note the Lot No. 1 northbound stopping sight distance may be reduced by vegetation and recommend requiring a traffic management plan for construction deliveries and prohibiting left turns into the Lot No. 1 vehicle access road after construction. Response: No left turns have been added to sheet C-3.2 and detailed on sheet C-5.1. It was decided to add a no left turn on the access road in an abundance of caution to further mitigate any stopping distance issues. For site deliveries flaggers with a shoulder taking are being proposed as detailed on sheet C-5.3

- *The Code requires the site be accessible to fire, police and other emergency vehicles [§97-73A(4)]. In accordance with our prior request, the vehicle access roads have been dimensioned. It appears the proposed turnarounds conform with the minimum length of the NYS Fire Code (to be confirmed by the Building Inspector) however portions of the Lot No. 2 access have been reduced to 16-foot wide, presumable to minimize grading and wetland impacts. We recommend you verify with the Building Inspector this reduction in road width complies with the NYS Fire Code. Response: We believe these to be in conformance with fire access requirements as proposed but await any further response from the code enforcement officer.*
- d) *Public Hearing – This is a major site plan; a public hearing is required for site plan [§97-76F] and subdivision [§83-22K] approvals. Since a public hearing is also required in connection with the special permit to be reviewed by the Town Board and variances to be reviewed by the ZBA, we suggest you discuss with Attorney Naughton whether a joint hearing is feasible. Response: This public hearing has taken place no further response needed.*
- e) *Stream Corridor & Reservoir Watershed Overlay – The purpose of the Stream Corridor & Reservoir Watershed Overlay (SC) district is to protect water quality, scenic resources and reduce the risk of flood damage. The SC district extends 150 feet from the mean high-water line of the Wallkill River and any stream or stream segment shown within the SC district on the Overlay District Map. The Wallkill River (identified on the plan as an existing stream) forms a portion of the southwesterly parcel boundary. Site plan approval may only be granted if the Board finds, with appropriate conditions, the proposed: (1) will not result in degradation of scenic character and will be aesthetically compatible with its surroundings and (2) will not result in erosion or surface water pollution from surface or subsurface runoff [paraphrased from Code §97-26B(3)]. SC Overlay District has been shown on the plan; all proposed improvements are located outside the district. Response: No response needed.*

- f) Scenic Road Corridor Overlay – The purpose of the Scenic Road Corridor Overlay (SR) District is to protect the Town’s scenic and rural character. The SR District extends 500-feet from the right-of-way of a portion of Owens Road³. The SR Overlay District has been shown on the plan and a portion of the Lot No. 1 array and fence encroach within the district. The applicant has requested a waiver from the SR District requirements which we suggest you discuss with Attorney Naughton. Additionally, we have the following comments:
- Site plan approval may only be granted if the Board finds, with appropriate conditions (paraphrase from Code): (1) no degradation of the scenic character and/or aesthetically compatible with surroundings; (2) minimal removal of native vegetation; (3) minimal visibility of structures from the road to the greatest extent practical; and (4) compliance with the landscaping, architecture, and fence requirements. The applicant provided detailed tree clearing plans indicating the retention of native vegetation within the 50-foot SR buffer⁴ (see Tree Clearing Plan, Sheet No. C-2.3). Additionally, the applicant has provided a photo simulation of this area (Figure Nos. 9, 10 and 11) showing the visibility of the Lot No. 1 array and a cross-section (Cross Sections, Sheet No. C-6.0) showing portions of the modules within the sight line from Owens Road. Further, the plans show the removal of existing native vegetation and approximately nine (9) deciduous trees ranging from 7- inch DBH to 12-inch DBH within the larger SR District. This native vegetation is located along the periphery of the Lot No. 1 array and we recommend you discuss with the applicant whether any portion of this vegetation may be preserved. **Response: Upon review some of these trees will still need to be removed due to being within the array footprint or grading line, although trees # 8, 9, 10, 12, 13, and 14 are now denoted to remain.**
- g) Floodplain & Ponding Area Overlay - The purpose of the Floodplain & Ponding Area Overlay (FP) district is to protect human life, prevent material losses and reduce the cost to the public of rescue and relief efforts caused by unwise occupancy of areas subject to floods and ponding [§97-25]. The FP district is defined on the National Flood Insurance Mapping Program Flood Insurance Rate Maps (FIRM) as "A" ("Special Flood Hazard Areas") Zones for the one-hundred-year floodplain. The Flood Insurance Rate Map dated August 3, 2009 shows a portion of the parcel along the southwesterly side of the parcel within the Special Flood Hazard Area. We understand no improvements are proposed within the floodplain and understand your findings will indicate such. **Response: No response needed.**
- h) Dimensional Regulations – The applicant has provided Zoning Summary Tables for each proposed lot (Table) on the Layout and Materials Plan, Sheet No. C-3.0, listing the required and provided (i.e., proposed) dimensions established by the Code. We have the following comments:
- Setbacks – The Table indicates the front, side and rear yards required are 100-feet and the minimum proposed setback is 42-feet (for Lot No. 1). The Layout and Materials Plan, Sheet No. C-3.0, graphically depicts multiple modules for the Lot No. 1 array encroaching into the required setback toward the north and the minimum setback now appears to be the westernmost module (adjacent to the 18-foot fence setback dimension) which appears less than 42-feet. This will require an area variance as indicated in the Table. The Table and plan should be revised to identify the largest variance to be requested. **Response: A Variance is being requested for this area and the dimensions requested have been added to the plans and appropriate table**

- *Fencing* – The Code requires all fencing greater than four (4) feet in height to be located 80-feet from all property lines [§97-55F(12)(d)]. The Table indicates the fence setback required is 80-feet and the minimum proposed setback is 18-feet (for Lot No. 1) which corresponds with the dimension on the plan. This will require an area variance as indicated in the Table. **Response: A Variance is being requested for this portion of the fence**
 - *Table/Plan Consistency* – The Table indicates the minimum provided side yard setback as 110-feet and the minimum provided rear yard setback of 854-feet (for Lot No. 2). Although these distances comply with the Code, the plan has been revised and these dimensions are no longer accurate. We recommend the table and plan be revised for consistency. **Response: The setback dimensions on the plans and tables have been updated for accuracy to reflect the current layout**
- i) *Supplementary Regulations* – Development of wind and solar energy systems requires compliance with the supplementary regulations listed under §97-55 (paraphrased below in underlined italics):
1. *The installation of any solar or photovoltaic energy system, including any accessory equipment, shall be outside any land area exhibiting sensitive environmental characteristics such as freshwater 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.*

*The plans show two (2) unquantified areas of wetland disturbance (Wetland A and B) to construct the vehicle access road to access Lot No. 2. The applicant previously indicated all onsite wetlands are under the jurisdiction of ACOE and they are seeking permits for these disturbances which will require wetland mitigations. We note the limits of wetland mitigation area is no longer graphically shown on the plans. **Response: The areas of wetlands disturbance based on the current layout have been added to the plans. Brian Orzell of the Army Corps of Engineers has reviewed the impact figures and agreed with our figure determination.***

*We note the plan shows fencing and LV trenching through areas identified as steep slopes; we recommend you confirm with the Building Inspector these are permitted under the Code. **Response: We are awaiting confirmation of this approach from the building inspector. If disallowed by code the possibility of directionally boring in these areas is also possible although considerably more expensive so we would obviously try to avoid that construction methodology if at all possible.***

*The applicant performed a field survey and has provided correspondence indicating the small whorled pogonia (NYS endangered and federal threatened plant species) is not present onsite. Further, the applicant has confirmed with NYS Office of Parks, Recreation and Historic Preservation the solar facility and access road will have no adverse impact on historical or archaeological resources provided the applicant maintains the existing vegetation at the southern perimeter and a vegetative buffer is provided for the access road. [Informational]. **Response: No response needed.***
 2. *Any proposal for a wind, solar or photovoltaic energy system shall conform to the provisions of §97-47, "Protection and Regulation of Agriculture," and Chapter 53, Clearing and Grading Control).*

We suggest your action include a requirement to comply with these Code provisions. The Code also requires conformance with the following:

- ☐ Any trees and/or shrubs to be removed or topped to accommodate the installation of a solar or photovoltaic energy system shall be accompanied by a site plan identifying the location, size and species of trees to be removed or topped and demonstrating the need to remove or top the trees.
- ☐ Solar energy systems shall be designed so tree removal is not required to the greatest extent practical. Where trees are to be removed the Planning Board may require replacement 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.

The applicant has provided detailed Tree Clearing Plans, Sheet Nos. C-2.1 through C-2.3, graphically identifying areas to be cleared (cutting and stumping) and topped (cutting) to eliminate panel shading. Additionally, the applicant identified the location, size and species of each tree surveyed and provided an updated Tree Survey (performed by North Country Ecological Services, Inc.) which indicated the removal of 1,393 individual trees six (6)

inch DBH or larger. The plans generally, indicate tree clearing within and along the proposed fence and tree topping outside of the fence. There appear to be some areas of clearing outside of the fence which we recommend the applicant confirm is not intended to be tree topping.

Response: Typical solar panel installation shows a 10' width outside the fenced area where trees are only topped and stumps remain in place. The plans were revised to adhere to this and now do not show tree clearing outside of the fence, except where grading proposals require stumping.

The applicant has provided a Tree Mitigation Plan (prepared by Saratoga Associates) recommending (paraphrased) two (2) tree mitigation areas:

- Area 1 (1.2-acres) located in the northwesterly portion of the site is proposed to be planted with bare root seedlings (consisting of Red Maple, Sugar Maple, Eastern Red Cedar and Pin Oak) four (4) to six (6) feet tall installed approximately 1 per 36 square feet or 6-feet on center. **Response: No response needed.**
- Area 2 (0.44-acres) located in the southeastern portion of the site is proposed to be planted with bare root seedlings (Red Maple and Serviceberry) four (4) to six (6) feet tall installed 1 per 100 square feet or 10-feet on center. **Response: No response needed**

The plans (Layout and Materials Plan, Sheet C-3.0) identify a Tree Planting Mitigation Area in the northwesterly portion of the site however this area scales approximately 7-acres. The applicant should confirm the size of the planting area and revise the plans to include details on the proposed plant species, size and location. Additionally, the plans (Landscaping Plan, Sheet C-3.1) graphically show tree plantings in the southeastern portion of the site, however the area and species should be revised to be consistent with the Tree Mitigation Plan. **Response: The tree mitigation areas on the plan**

set have been updated on the plans to reflect the tree mitigation plan.

- ☐ The installation of any 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 plans show several existing permanent easements as well as rights-of-way and clearing in the vicinity of the northeasterly and southwesterly parcel boundaries. The applicant has provided portions of a title report for this parcel and has confirmed there are no restrictions on clearing. [Informational]. **Response: No response needed.**

- ☐ 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 applicant has provided a Tree Clearing Plan, Sheet No. C-2.0, quantifying the total clearing on Lot No. 1 as 3.48-acres and total clearing on Lot No. 2 as 19.87-acres which corresponds with 12.61% and 20.14% respectively. **Response: No response needed.**

- ☐ Once constructed, ground cover below the solar energy system must be restored with low-maintenance, drought-resistant, native, non-fertilizer dependent flora or other protective low-maintenance surface as the Planning Board may approve. Additionally, the Code prohibits the use of stone beneath solar panels and requires a seed mixture of native, noninvasive, shade tolerate grasses.

The plans include a Seeding Specifications Table indicating a northeast pollinator mix between and under the solar panels. **Response: No response needed.**

3. The design of a 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 applicant previously provided equipment catalog cutsheets showing some system components. Additionally, the plans include information on the arrangement and scale of equipment on each equipment pad. We recommend the plan be revised to identify each component. **Response: The detail sheet has been updated for clarity including dimensions of equipment and a table for all acronyms on this sheet.**

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.

*The Vehicle Gate Detail, Sheet No. C-5.0, shows the location of the owner and emergency contact information placard/sign on the fence. We recommend, as a condition of your action, the applicant install warning signs and an emergency contact sign for ESO use. **Response: No response needed***

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

*The plans include a detail on the Signage Plan, Sheet No. C-3.2, and we recommend you confirm this detail meets National Electric Code requirements with the Building Inspector. **Response: It is New Leaf Energy's opinion that our signage does meet NEC code but would welcome confirmation from the Building Inspector.***

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.*

The applicant has provided a study which evaluates the potential for glare from seven (7) surrounding residential properties and along Owens Road. The Glare Study was last revised in May 2022 to coincide with the current project layout and design. The revised Glare Study addresses our prior comments. We have the following comments:

☐ *The Glare Study assumes all propose panels are surfaced with an anti-reflective coating. We suggest you consider requiring the use of anti-reflective coating as a condition of any action. **Response: No response needed.***

☐ *The Glare Study indicates forest cover will screen the solar panels from four (4) of the seven (7) receptors and Owens Road. This cover consists of two (2) significant buffers which are identified in the Glare Study (Figure No. 6). The applicant should show these buffers on the Tree Clearing Plan. We recommend you require a deed restriction or other mechanism to ensure these buffers will be preserved. **Response: This is agreeable and a deed restriction notation has been added to the tree clearing plan.***

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.*

*The plans include a Stand Alone Light Mounting Detail indicating one (1) light at each equipment pad area which will be mounted on a strut, directed downward and shielded from abutting properties. We recommend any action include your typical condition regarding lighting. **Response: No response needed.***

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.

The plan indicates two (2) new gravel vehicle access roads from Owens Road will be provided. The southern access driveway to Lot No. 1 is approximately 635 linear feet long. The northern access driveway to Lot No. 2 is approximately 1,580 linear feet long. The plan shows the vehicle access gate for Lot No. 2 approximate 1,300 linear feet from Owens Road along a portion of the driveway at 10% slope. We recommend the applicant consider relocating the gate closer to Owens Road in the vicinity of the turnaround. Additionally, we note the driveway access will require approval from the Highway Superintendent (see comment below). **Response: A second access gate has been added near the turnaround as suggested above. A Knox box is denoted on the plan set for emergency services access. The plan set is being submitted under separate cover to the Highway Superintendent for their review**

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. **Response: The planning board has requested an agricultural style fence in lieu of chain link, the plans currently reflect this request.**

See §97-55(F)(12) below.

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. (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. (b) The installation of any energy system shall 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 and (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.

We suggest you make these requirements a condition of your action. **Response: No response needed.**

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.

The applicant has confirmed in their December 16, 2021 correspondence no battery

systems are proposed as part of this facility. **Response: No response needed.**

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; (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; (c) Existing vegetation may be used to satisfy all or a portion of the required landscaped screening; (d) 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 and may be a maximum of eight feet in height, unless otherwise required by the NEC [see § 97-55F(9)].

The plan shows conceptual locations of proposed plantings and indicate species, density and location of plantings to be finalized by a landscape architect. During your February 3, 2022 meeting you requested updated renderings. The applicant has submitted photo simulations however these appear to show the prior design (e.g., stockade and chain-link fencing). Since screening of adjacent properties will likely be a primary concern during the public hearing, we continue to recommend the applicant submit the final landscaping plans and renderings of the screening prior to, or subject to, scheduling a public hearing. The plans include cross sections which also appear to consider the prior design (e.g., 14-foot access road, solid privacy fence) (see Cross Sections, Sheet No. C-6.0). In accordance with our prior comments, we suggest the applicant consider an earth berm to increase the elevation of the landscaping in an effort to increase screening.

As requested, the applicant replaced the chain-link fence with an eight (8) foot woven wire agricultural fence. In accordance with your prior practice, we recommend the applicant provide areas for wildlife to pass. **Response: The plans have been updated with the species, location, and density of all proposed plantings as proposed by a registered landscape architect (Saratoga Associates). A landscaping berm has been added to the plans where the visual simulations and cross sections suggested additional screening could be beneficial. The visual sims are currently being updated for accuracy and will be submitted under separate cover within the next week.**

13. If a solar energy system ceases to perform its originally intended function for more than 12 consecutive months or construction is not completed within 18 months of final site plan approval, the property owner shall remove the equipment and facilities and restore the property to its original condition unless he can show to the satisfaction of the Building Inspector good cause as to why this time should be extended and then only to a maximum extension of an additional 45 calendar days. To secure such removal, the developer shall post a decommissioning cash bond with

the Town in an amount to be established by the Town Board upon recommendation from the Town Engineer.

We recommend this be a condition of your action. **Response: No response needed.**

14. A copy of the manual shall be provided to the Building Department and Fire Department when the applicant requests a building permit be issued.

We recommend this be a condition of your action. **Response: No response needed.**

15. Solar energy systems shall be designed to sustain wind loads up to 110 miles per hour (mph) and snow loads of 50 pounds per square foot (psf) unless more stringent requirements are mandated by other regulatory agencies.

We recommend your action include a requirement for this information to be submitted and reviewed to our satisfaction prior to the issuance of a Building Permit. **Response: This information will accompany the construction level documents generated for submittal when requesting the building permit as stated above.**

16. The site is outside the Scenic Road Corridor Overlay District Code and the Code requires a visual impact assessment including a viewshed analyses, before and after graphical representations and alternative designs and colors.

A portion of the site is within the Scenic Reservoir Corridor. During your February 3, 2022 meeting, the applicant reviewed a Viewshed Analysis which shows site visibility from several vantage points based on existing topography views of the project as viewed from Owens Road. At that time, you requested the Viewshed Analysis be revised to: (1) consider leaf-off conditions due to the proposed deciduous trees; (2) provide updated simulations from the driveways which incorporate the specific number of utility poles anticipated; and (3) provide an analysis from existing residential dwellings. The updated analysis submitted under the applicant's May 18, 2022 cover includes some leaf-off conditions but does not appear to address your request for updated driveway simulations or an analysis from existing residential dwellings. **Response: The visual simulations are currently being updated for both driveway locations to correct inaccuracies as stated above. An additional simulation has been created from the rear property line of the directly north abutter. An attempt was made to take this simulation from the abutters rear yard but were unable to make contact with the landowner, as such this simulation is made from the most pertinent and accessible vantage point.**

17. A decommissioning plan must be submitted by the solar developer as part of the site plan and special permit applications. Although the agreement between the property owner and the company installing and operating the system may assign the decommissioning responsibilities to the company, the responsible party for the purposes of this code shall be the property owner. The decommissioning plan shall identify the anticipated life of the project, method and process for removing all components of the solar energy system and returning the site to its preexisting condition. It shall include an estimate of decommissioning costs. The decommissioning plan shall be initiated within the time frames provided in § 97-55F(13).

*A decommissioning cost estimate/plan has been submitted. We will provide further comments prior to the Town Board's action on the estimate. **Response: No response needed.***

18. *An agreement with a utility for interconnection of the completed facility must be established and clearly documented within the site plan and special permit review.*

*In response to our request for the utility interconnection agreement and details of each interconnection the applicant previously indicated the pole layout is represented on the plans. The plans show each system with four (4) 35-foot-tall poles spaced 40-feet on-centers along each driveway. **Response: The interconnection application diagrams have been added to this submittal for review. This is what's currently in discussion / proposed to the utility and our best understanding of the requirements therein.***

2. *Site Plan –*

- a) *Access & Parking* – *The plan indicates two (2) driveway access points but does not address the connection with the Town road. The Code requires new driveways on Town roads, including the conversion of farm roads into residential driveways to require permission from the Town Superintendent of Highways [§97-52A]. We continue to recommend the applicant provide construction details so you may confirm compliance with the Code. The plan has been revised to identify two (2) laydown and parking areas. We note both areas are within the Lot No. 1 array and scale approximately 100-feet by 100-feet. The applicant should confirm these areas are practical in terms of location and sufficient in terms of total area. **Response: This submittal is concurrently being sent to the Highway Superintendent for their review, details have been added for clarification of materials and methodology of construction of the gravel roads in this area. The laydown areas have been reviewed and adjusted to be the most practical for mobilization and construction.***
- b) *Utilities* – *This is an unmanned installation. The applicant has advised no water and/or sewer service is required. **Response: No response needed.***
- c) *Stormwater* – *Per the NYSDEC SPDES General Permit for Construction Activities, soil disturbances greater than one acre require a full Stormwater Pollution Prevention Plan (SWPPP). Since the area of disturbance exceeds one (1) acre we understand post construction stormwater management practices are required. The plans have been revised to include detention ponds and the applicant has provided a Stormwater Memo Report. We have the following initial comments:*
- *SWPPP* – *The Stormwater Memo Report indicates a supplementary and comprehensive Stormwater Pollution Prevention Plan (SWPPP) will be provided in the final approval stages of the project. The Code indicates no application will be reviewed until a SWPPP has been received [§80C-8A]. If Attorney Naughton advises receipt of the SWPPP is necessary prior to scheduling the public hearing perhaps you can schedule the hearing subject to receipt of the SWPPP. Further, we note for the applicant's information the Code specifies the contents of the SWPPP [§80C-8B to D]. **Response: A full SWPPP is included in this submission for review.***
 - *Stormwater Memo Report* – *We understand the purpose of the Stormwater Memo Report is to provide a basis for design of the proposed post-construction practices (identified as detention basins). Future calculations should include additional data*

(e.g., pre and post mapping, identification of the location of the study points and time of concentration paths and calculations). **Response:**A full SWPPP containing the requested data and information is included in this submission.

- Detention Pond Plan – The plans include details of the six (6) proposed detention ponds. We have the following comments:
 - Construction & Maintenance Access – The ponds are generally located along the periphery of the arrays. In several instances the ponds are located outside of the proposed fence enclosure; the applicant should indicate how these ponds will be accessed for construction and maintenance. Pond P1B.3 spans both lots and will require cross easements. **Response:** The plans have been revised to include a limited use access road to each stormwater management area.
 - Discharge & Sediment – The ponds typically include a discharge culvert. The applicant should address how potential erosion at the discharge will be prevented. **Response:** Flared end sections equipped with rip-rap outlets have been added to the drainage culverts.
 - Conveyance – The plan shows several grass swales. Information should be provided on the swale cross-section (dimensions), lining and grading. Additionally, the plan should show the complete location of all swales including any swales to be installed along the proposed access roads. The plan shows an existing ditch to be removed and should include details for construction. **Response:** The grading plans were updated and a stormwater water swale detail is now included. The existing ditch is located with the area designated greater than 15% slopes and remains unchanged.
 - Fencing – Fencing is shown running through several ponds and the plans will need to be revised to resolve this inconsistency. **Response:** The fences have been adjusted, this was a drafting error.
 - Culverts – The Access Road Profile shows five (5) 24-inch diameter culverts along the northern access road. These are graphically shown on the Grading Plan. The Grading Plan shows a 12-inch culvert crossing the southern access road, however this is not shown on the Access Road Profile. Future plan submissions should include construction details (e.g., pipe material, trench conditions, invert elevations, headwall conditions, etc.). **Response:** The southern Access Road Profile was revised to show the 12” cross culvert with various pipe specific information.
- Sign & Seal – Future plan submissions should be signed and sealed by the professional who prepared the plans. **Response:** Sign and sealed documents will be provided once all required approvals are received.
- Agricultural Data Statement – The project site is located within an agricultural district. Pursuant to the Code requirement, the applicant submitted an Agricultural Data Statement. The Code requires public hearings for major site plans to follow the provisions on agricultural data statements for special permits [§97-76F(1)]

which requires the Secretary of the Planning Board to mail written notice of the application to the owners of the land as identified by the applicant in the agricultural data statement. **Response: No response needed.**

- Road Inventory – The applicant previously indicated a road inventory survey (i.e., road condition assessment) will be performed prior to construction and at the conclusion of construction to identify any damage caused by the proposed projects. We recommend you consider requiring this as a condition of your action. **Response: No response needed.**
 - Grading – We recommend any locations in excess of 3:1 (horizontal:vertical) grading include erosion control blanket to reduce potential erosion. **Response: Areas of 3:1 slopes or greater now denote a requirement for erosion control blankets on sheet C-4.0**
 - Civil Details – The plans include several details which do not appear to be utilized (e.g., Concrete Washout Basins, Mulch Tube and 4' Access Gate). These should be identified on the plan or deleted from the plan set. **Response: Areas where these measures are being utilized are now denoted on their respective sheets.**
 - Sheet List Table – The Sheet List Table on the Title Page should be revised to correspond with the plan sheets included in the set (e.g., add Tree Clearing Plans, Detention Pond Plan and delete Electrical sheets). **Response: This has been updated for accuracy as well as additional sheets created for this submittal.**
 - Module & Fence Conflicts – We note at least two (2) locations where proposed modules conflict with the proposed fence. The applicant should review the plan and eliminate any plan inconsistencies. **Response: This was a drafting error and has been corrected.**
 - Proposed Tree Line – The proposed tree line on the Landscaping Plan is no longer shown and should be returned to the plan. **Response: The Landscaping Plan was revised to show the proposed tree line.**
 - Text Legibility – Some text on the Access Road Profiles is illegible and should be corrected in subsequent submissions. **Response: The Access Road Profiles were revised and now show legible text.**
3. SEQRA – During your March 17, 2022, meeting, you adopted the Part 2 EAF identifying several potential small impacts and two (2) potential moderate to large impacts (i.e., surface water and historical & archeological resources). The applicant submitted a Part 3 EAF; we have the following comments:
- Surface Water – The Part 3 EAF indicates the proposed wetland disturbances are under the jurisdiction of the ACOE and will require a Nationwide Permit. The Part 3 EAF indicates the NYSDEC has no jurisdictional wetlands onsite. The applicant should provide a copy of NYSDEC's determination to the Building Department. **Response: NYSDEC noted in an email “no state regulated wetlands are located on the parcel so a validation would not be required from DEC.” A copy of this email chain is provided in this submission for the Town's use.** ..\\..\\State\\NYSDEC\\111 Owens Rd_031722_PJD Response.pdf
 - Historical & Archeological Resources – The Part 3 EAF indicates Phase 1A and 1B studies have been submitted to NYS Office of Parks, Recreation and Historic Preservation who has



determined the project will have no adverse impact on historical or archaeological resources provided the applicant maintains the existing vegetation at the southern perimeter and a vegetative buffer is provided for the access road. Response: A buffer along Owens Road is now being proposed on sheet C-2.0 to satisfy this condition.

Additional topics of interest resulting from the public hearing for this project:

Glare Study: An updated glare study is attached to this submittal which denotes the remaining receptors as suggested by the planning board.

Visual Simulations: Visual simulations were requested for the Ibold property. Attempts were made to contact this abutter to coordinate a simulation from this abutters rear yard but after exhausting our available time frame it was decided that a visual simulation from the property line would be the next best option. Due to the timing of awaiting the abutter response this simulation will follow under separate cover within the next week.

PFOS and PFOA Discussion regarding the presence of these chemicals within the solar panels: Upon researching this topic it seems that there is a lot of conflicting data about whether PFOS and PFOA could be present within a large-scale solar system. We've attached an article from the "Carolina Journal" Dated August 27, 2018 entitled "EPA Confirms Gen X-related Chemicals Compounds Used in Solar Panels" and while the title seems to infer that all solar panels have the presence of PFAS of PFOS chemicals; upon review of the article the EPA more directly states that the source of PFAS and PFOS in SOME panels is tied directly to the panel coating and whether this is a Teflon based product or not. In a separate fact sheet authored by Dr Annick Anctil of Michigan State University titled "Facts about solar panels: PFAS Contamination" dated October of 2020, Dr Anctil states that PFAS chemicals are not prevalent in todays solar panels as better alternative materials exist. It should be noted that while Dr Anctil's fact sheet takes a scholarly approach to examine sources of possible PFAS and PFOS sources in solar panels the EPA states a lack of knowledge and the overall prevalence of these chemicals in general market products as a source for their concern. Regardless of the disagreement between these 2 sources of whether or not PFAS or PFOS can be expected in any given solar installation, they tend to agree that if the solar panels being proposed had presence of these chemicals they would be directly tied to the presence of a Teflon based coating. It is based on this information that New Leaf Energy believes a condition of approval requiring that no PFOS or PFAS chemicals be utilized or present on site is an achievable and verifiable requirement of pulling a building permit. The following materials have been attached to help guide this discussion:

- **HT-SAAE Module Laboratory Results:** This document is a lab test of possible hazardous materials within the solar panels
- **JA-Solar SDS Report:** While this SDS is for an alternative panel than what is being proposed it is one of the most comprehensive industry SDS sheets in regards to overall chemical makeup of a typical solar panel.
- **Envirotemp FR3 Fluid SDS:** SDS Sheet for transformer fluid
- **"Facts about solar panels: PFAS Contamination" dated October of 2020**
- **"Carolina Journal" Dated August 27, 2018 entitled "EPA Confirms Gen X-related Chemicals Compounds Used in Solar Panels**

Tree Mitigation Proposal: The members of the planning board and town board discussed whether a 4'-6' bare root tree as proposed is sufficient mitigation as opposed to a ball root tree. Upon discussions with our landscape architect, they stated that a bare root tree is the standard for large scale tree mitigation projects due to cost, planting duration, and in the case of our wetland tree plantings disturbance area. It should also be noted that while the mitigation trees are being proposed as bare root, the landscaping trees are being proposed as ball root, as the survivability of these plans is paramount to the visual mitigation of the project. It should also be noted that the mitigation trees being proposed are being guaranteed with a landscaping bond and at a rate of 1.2:1 replacement ratio.

During a September 7th, 2022 meeting with the Orange County Planning Department the question was asked, given the survivability issues of tree mitigation plantings in general, would there be a possibility of a community host agreement equal to the cost of the tree mitigation (not including landscaping trees) that could be applied towards an open space project within the town in lieu of the 1:1 requirement for tree replacement; New Leaf Energy represented that this was possible



and preferable if that was of interest to the town. This should be discussed at the next planning board meeting if there's a possible applicable project within the Town of Goshen.

We trust that this information is sufficient for the towns use and look forward to meeting with the planning board at the next available planning board meeting. Please feel free to reach out in the meantime with any comments questions or concerns.

Submitted Materials:

#	Quantity	Description	Revision Date
1	7	Site Use Plan (24"x36")	09/14/2022
2	7	Comment Response Letter	09/13/2022
3	7	Interconnection Application Layout Site #1 (11x17)	06/13/2022
4	7	Interconnection Application Layout Site #2 (11x17)	06/13/2022
5	7	Updated Glare Study	08/10/2022
6	2	SWPPP	09/14/2022
7	7	PFOS PFAS Supplemental Document Packet	09/13/2022

Best Regards,



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