



Historic Resources Survey

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

NYSOPRHP/SHPO Project Review No. 18PR07885 / DPS Case No. 18-F-0087

Prepared for:

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February 2020

MANAGEMENT SUMMARY

NYSOPRHP/SHPO Project Review Number:	18PR07885
NYSDPS Case Number:	18-F-0087
Involved State/Federal Agencies:	New York State Office of Parks Recreation and Historic Preservation/State Historic Preservation Office (NYSOPRHP/SHPO; Section 14.09); New York State Department of Public Service (Article 10); U.S. Army Corps of Engineers (anticipated).
Phase of Survey:	Historic Resources Survey
Location Information:	Towns of Athens and Coxsackie, Greene County
Survey Area:	
Facility Description:	Up to 100-megawatt industrial-scale solar facility including photovoltaic arrays, electrical inverters, electrical collection system, access roads, temporary laydown areas, and a point-of-interconnection substation.
Historic Resources Study Area:	127 square miles (5-mile radius)
USGS 7.5-Minute Quadrangle:	<i>Hudson North, NY</i>
Historic Resources Survey Overview:	The historic resources survey has identified and evaluated 14 historic properties located within the Area of Potential Effects (APE) for Indirect Effects. These include three properties listed in the State and/or National Register of Historic Places (S/NRHP), one of which (Olana) is a National Historic Landmark (NHL). In addition, there are nine newly identified properties located within the APE for Indirect Effects that EDR is recommending meet S/NRHP eligibility criteria. There are two properties that were previously included in NYSOPRHP/SHPO's Cultural Resources Inventory System (CRIS) inventory that EDR is recommending not S/NRHP eligibility criteria. In addition, the Facility Area is partially located within the S/NRHP-listed Flint Mine Historic Archaeological District. Please note that this report addresses only above ground historic resources; information concerning the Facility's potential effect on archaeological resources is being provided to NYSOPRHP/SHPO under separate cover.
Report Authors:	Susan Arena, Andrew Roblee, Grant Johnson, and Patrick Heaton, RPA
Date of Report:	February 2020

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1.0 INTRODUCTION

1.1 Purpose of the Investigation

On behalf of Flint Mine Solar, LLC (the Applicant), Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) prepared this historic resources survey report for the proposed Flint Mine Solar (the Facility), which is a proposed utility-scale solar project in the Towns of Athens and Coxsackie, in Greene County, New York. The historic resources survey was prepared as part of review of the Facility under Article 10 (Certification of Major Electrical Generating Facilities) of the New York State Public Service Law. The information and recommendations included in this report are intended to assist the Department of Public Service (DPS) and the New York State Office of Parks, Recreation and Historic Preservation / State Historic Preservation Office (NYSOPRHP/SHPO), the U.S. Army Corps of Engineers (USACE), and other New York state and/or federal agencies in their review of the proposed Facility under Article 10 of the New York State Public Service Law, Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law, and/or Section 106 of the National Historic Preservation Act, as applicable.

Please note that this report addresses only above ground historic resources; information concerning the Facility's potential effect on archaeological resources is being provided to NYSOPRHP/SHPO under separate cover. Although the Facility's potential effects on archaeological resources will be evaluated in separate (i.e., archaeological survey) reports for the project, it is important to acknowledge that the Facility Area is located in an archaeologically sensitive area. Portions of the Facility Area are located within the Flint Mine Hill Archaeological District, which is listed in the State/National Register of Historic Places (S/NRHP). The Facility Area and surrounding vicinity include numerous archaeological sites associated with Pre-Contact period (from approximately 13,000 years ago to approximately 500 years ago). Native American groups exploited the abundant exposures of Mount Merino/Normanskill chert present in the local hills and ridges for stone tool production. These groups also made camps on the flats and lower hills and ridges throughout the area.

As described in 16 NYCRR § 1001.20 (Exhibit 20: Cultural Resources), an Article 10 application must include:

(b) A study of the impacts of the construction and operation of the facility and the interconnections and related facilities on historic resources, including the results of field inspections and consultation with local historic preservation groups to identify sites or structures listed or eligible for listing on the State or National Register of Historic Places within the viewshed of the facility and within the study area, including an analysis of potential impact on any standing structures which appear to be at least 50 years old and potentially eligible for listing in the State or National Register of Historic Places, based on an assessment by a person qualified pursuant to federal regulation (36 C.F.R. 61).

The purpose of the historic resources survey is to identify and document those buildings within the Facility's Area of Potential Effects (APE) that appear to satisfy State and National Register of Historic Places (S/NRHP) eligibility criteria. The following terms are used throughout this document to describe the proposed project:

<u>Facility:</u>	Collectively refers to all components of the proposed project, including PV panels and support structures, inverters, transformers and energy storage, access roads, buried and above ground collection lines, a POI switchyard and substation, and staging areas.
<u>Facility Area:</u>	Those parcels or portions of parcels, under the Applicant's control, that have been evaluated during development of the project, including any parcels or portions of parcels being considered for conservation, mitigation and/or open space.
<u>Historic Resources Study Area:</u>	The area within five miles of the Facility boundary, which was defined pursuant to stakeholder comments in Section 2.20.2 of the Facility's Final Scoping Statement (FSS) as the appropriate study area for indirect effects on cultural resources. The current Historic Resources Study Area includes approximately 127 square miles.
<u>APE for Direct Effects:</u>	The APE for Direct Effects for the Facility is the area containing all proposed soil disturbance associated with the Project. As presently envisioned, the current Facility layout has an APE for Direct Effects of approximately 500 acres, although the proposed locations of specific components are currently being refined based on ongoing environmental studies and engineering considerations. It is anticipated that the APE for Direct Effects will change as the Facility's design advances and becomes more refined.
<u>APE for Indirect Effects:</u>	The APE for Indirect Effects on historic resources includes those areas where the Facility may result in indirect effects on cultural resources, such as visual or auditory impacts. As presently envisioned, the APE for Indirect Effects for the Facility is the area within the Historic Resources Study Area, as defined in this section, which is within the potential viewshed (based on topography and a maximum PV panel height of 15 feet) of the Facility. The current Facility layout has an APE for Indirect Effects of approximately 2.4 square miles (1.9 percent) of the Historic Resources Study Area (Figure 3).

All cultural resources studies undertaken by EDR in association with the Facility have been conducted by professionals who satisfy the qualifications criteria per the Secretary of the Interior's Standards for Historic Preservation (36 CFR 61).

1.2 Facility Location and Description

Flint Mine Solar is a proposed 100-megawatt (MW), utility-scale, photovoltaic (PV) solar facility located within the Towns of Athens and Coxsackie, Greene County, New York (Figure 1). The lands being evaluated to host the Facility, or the "Facility Area", include all parcels or portions of parcels, under the Applicant's control, that have been evaluated during development of the project, as well as any parcels or portions of parcels being considered for conservation, mitigation and/or open space. The Facility Area comprises approximately 1,638 acres of mostly abandoned agricultural fields,

shrubland, and forestland, which would ultimately be leased or purchased by the Applicant prior to constructing the Facility.

Approximately 1,000 acres of land within the Facility Area will remain undeveloped by Flint Mine Solar for conservation purposes. These conservation lands include areas of undisturbed forestland for preservation of habitat and sensitive flora species, wetland resources, sensitive cultural resources areas, and open space/grassland habitat, which would be preserved as grassland habitat for sensitive wildlife and flora species.

The remaining portions of land (approximately 638 acres) within the Facility Area comprise the “Facility Site,” which includes all parcels or portions of parcels that are proposed for construction and/or operation of the major electric generating facility. The Facility Site will consist of rows of PV modules in discrete sub-arrays. These arrays will be enclosed by wildlife-friendly fences (for safety and security purposes). In addition, the Facility Site will include an electric collection line system with underground, overhead, and messenger supported wiring collection lines, a network of access driveways, inverters, battery energy storage devices, a Point of Interconnection (POI) switchyard, temporary construction component laydown areas, as well as other Facility components

The Facility will consist of rows of PV modules in discrete sub-arrays dispersed throughout the Facility Area. These arrays will be enclosed by fences (for safety and security purposes). In addition, the Facility will include electrical direct current (DC) collection cables that connect the DC Combiner Boxes to inverters and storage devices, and medium voltage alternating current (AC) cables that run from the sub-arrays to a Point of Interconnection (POI) switchyard, as well as other Facility components. Design and engineering of the Facility is ongoing; however, a preliminary conceptual map of the Facility Area, showing the concept of dispersed PV clusters of modules within a larger landscape of undeveloped areas, is included as Figure 2. To deliver power to the New York State power grid, the Applicant proposes to interconnect to both the existing LaFarge to Pleasant Valley 115-kV transmission line and the Feura Bush to North Catskill 115kV line, both of which are operated by National Grid. Existing above ground transmission lines traverse the proposed Facility Area from this substation in a north-south orientation.

1.3 NYSOPRHP/SHPO and Article 10 Consultation

Major milestones to date in the Article 10 review process for the Facility are summarized below:

- A Public Involvement Program Plan (PIP) for the project was prepared as part of the Article 10 process and released in February 2018, and finalized in April 2018.¹ The PIP is designed to initiate the Article 10 process,

¹ The Public Involvement Program Plan (PIP) for the Facility is available on the DPS website here: <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={60227341-C3F0-4F00-958E-5D2B99B2E2B3}>

and includes consultation with the affected agencies and other stakeholders; pre-application activities to encourage stakeholders to participate at the earliest opportunity; activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties; the establishment of a website to disseminate information to the public and updates regarding the Facility and the Article 10 process; notifications to affected agencies and other stakeholders; and activities designed to encourage participation by stakeholders in the certification and compliance process.

- Public outreach has included a series of open house meetings held in the Town of Coxsackie in May and November of 2018, which were each attended by more than 100 participants, as well as a series of smaller meetings with neighbors, municipal representatives, and various stakeholders throughout the development of the project. In addition, pursuant to 16 NYCRR 1000.24, the Applicant has distributed outreach letters and held meetings/workshops to solicit input and feedback from neighbors, municipal planning representatives, and other stakeholders specific to visually sensitive sites (including historic properties) and visual impacts.
- Pursuant to 16 NYCRR 1000.5(g), a Preliminary Scoping Statement (or, PSS; EDR, 2018a) for the Flint Mine Solar Project was filed on November 2, 2018. Persons, agencies and municipalities submitted comments on the PSS, and Flint Mine Solar responded to those comments in a submission to the DPS and involved parties on January 11, 2019². Based on the comments received on the PSS, the Applicant prepared Final Scoping Statement (or, FSS³; EDR, 2019), which was submitted to the DPS and circulated to involved parties on September 11, 2019.
- A log of all stakeholder and outreach meetings conducted by the Applicant was included in the PSS (and updated for the FSS) and will be updated for the Article 10 Application (outreach efforts specific to historical resources are summarized in Section 2.1 of this report).
- Comments received during the scoping process have shaped the content and methodology of environmental studies for the project, including cultural resources studies. For instance, the Historic Resources Study Area defined in Section 1.1 of this report (i.e., all areas within 5-miles of the proposed Facility) was developed in response to comments received from the NYSOPRHP/SHPO, the Town of Coxsackie, and Scenic Hudson.
- In response to the PSS and visual analysis outreach, comments regarding Olana State Historic Site were received from DPS and Scenic Hudson. DPS Staff recommended “that line-of-sight figures and/or wire-frame visual simulation be prepared for vistas from the Olana State Historic Site carriage trail viewpoints, extending north-westerly toward the Facility Area, to demonstrate limitations on visibility” (NYSDPS, 2018, 2019). Scenic Hudson noted that Olana, as a National Historic Landmark, should be treated with greater regard than resources that are listed in the National Register of Historic Places (Scenic Hudson, 2019). As a result, a site

² Preliminary Scoping Statement, or PSS, Response to Comments is available on the DPS website:

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FAF4706A-E098-40A7-B256-7554DA111EE6}>

³ The Final Scoping Statement, or FSS, for the Facility is available on the DPS website:

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={26F6EA2C-9434-4975-AFB5-4D7EFACE9304}>

visit at Olana was completed on March 28, 2019 by EDR staff for the purpose of obtaining viewpoints to address DPS and Scenic Hudson. A full analysis of these viewpoints as well as visual simulations from Olana will be included in the Visual Impact Assessment for the Facility (i.e., Exhibit 24 in the Article 10 Application for the Facility).

- In response to the PSS and visual analysis outreach, comments addressing potential effect on historic properties and/or archaeological sites were received from interested parties. Concerns about Flint Mine Hill National Register Archaeological District were raised by the Greene County Historical Society, the Town of Coxsackie, and Scenic Hudson (Hallock, 2019; Town of Coxsackie, 2018; Scenic Hudson, 2018). Potential effects to this district are addressed in more detail in the archaeological survey report prepared under separate cover. Doreen Davis from the Town of Catskill noted six National Register listed sites that are located the Town of Catskill within the Study Area (Davis, 2019), although these properties are not within the APE.

16 NYCRR § 1001.20 indicates that the scope of cultural resources studies for a major electrical generating facility should be determined in consultation with NYSOPRHP/SHPO.

The Applicant initiated formal consultation with the NYSOPRHP via an in-person meeting held on February 9, 2017 at the offices of the NYSOPRHP, Division for Historic Preservation in Peebles Island, NY. A follow-up meeting occurred at the NYSOPRHP's Peebles Island Office on March 13, 2017. This meeting included representatives from the NYSOPRHP, the New York State Department of Environmental Conservation (NYSDEC), and the Stockbridge-Munsee Band of Mohican Indians (SMBMI). During these meetings, the Applicant described the intended location and scope of the Facility and acknowledged the archaeological sensitivity of the Facility Area and surrounding area. The Applicant discussed various ideas and options of minimizing impacts to archaeological resources, including consideration of design elements and construction methods (e.g., minimizing the need for trenching for collection lines) that would help to minimize potential soil disturbance. In addition, the Applicant suggested their interest in potentially acquiring or otherwise assisting with the transference of a portion of the nearby Flint Mine Hill archaeological site to create a permanent conservation easement, or similar, for the site.

On July 21, 2017 the Applicant, EDR, and representatives from the NYSOPRHP, SMBMI, NYSDEC, Southold Indian Museum, and the Archaeological Conservancy met at the Facility Area. During the site visit, attendees discussed the conceptual site layout and design, including roads, collection lines, the switchyard location, and other Facility components; as well as avoidance, minimization, and mitigation options. In addition, the Southold Indian Museum hosted a tour of the nearby Flint Mine Hill archaeological site, which they currently own. At the conclusion of the site visit, the Applicant discussed potential cultural resources mitigation projects with the Southold Indian Museum and the Archaeological Conservancy. This included consideration of potentially transferring ownership of the portion of the Flint

Mine Hill site that is currently owned by the Southold Indian Museum to the ownership of the Archaeological Conservancy as a means to mitigate potential impacts to archaeological resources that could result from soil disturbance during construction of the Facility.

The Applicant initiated formal project review with NYSOPRHP/SHPO via the Cultural Resources Information System (CRIS) website on December 10, 2018. The initial submission included a copy of the PSS (EDR, 2018a) and the *Phase 1A Archaeological Sensitivity Assessment for Flint Mine Solar* (EDR, 2018b). Regarding evaluation of the historic significance of all buildings/structures/districts within or adjacent to the project area, Linda Mackey (NYSOPRHP/SHPO) requested site plans showing the proposed layout of the solar panels.

The FSS (EDR, 2019) was uploaded to the CRIS website on September 17, 2019. Correspondence was provided in response to the FSS from John Bonafide, Director, Technical Preservation Services Bureau, on October 1, 2019:

Based upon our review of this updated document, we agree that the content of the Cultural Resource section (Exhibit 20) and the Visual Impacts section (Exhibit 24) are appropriate for this activity. However, we will also request that a glare study be incorporated into the historic resources survey and visual impact evaluation process. We also ask that the site of the former Catskill Mountain House (North-South Lake Park, Haines Falls, NY) be included as a visual receptor (Bonafide, 2019).

A copy of this correspondence is included as Appendix A.

1.4 Facility's Area of Potential Effect (APE) and Study Area

The Area of Potential Effect (or, APE), study area, scope, and methodology for this historic resources survey were defined during the scoping process, including preparation of the PSS, response to stakeholder comments, and preparation of the FSS, as described above (see also defined terms in Section 1.1 of this report). The 5-mile Historic Resources Study Area extends beyond Greene County into Columbia County, and includes an approximately 15-mile portion of the Hudson River. Study Area includes the City of Hudson; Villages of Coxsackie, Athens, and Catskill; sizable unincorporated places such as Leeds, Jefferson Heights, Lorenz Park, and Stottville; and several smaller hamlets. The potential visibility and visual impact of the Facility is being evaluated for all these areas; however, given the low-profile of Facility components and extent of screening provided by adjacent topography and vegetation, visual impacts within this wider area are anticipated to be negligible (see further discussion below in Section 1.4.1 regarding the Area of Potential Effect for Indirect Effects).

1.4.1 Area of Potential Effect

Direct Effects

The Area of Potential Effect (APE) for Direct Effects for the project is defined as all areas where potential soil disturbance (or other direct, physical impacts) is anticipated during construction of the Facility. As further described in the FSS (EDR, 2019), the Applicant believes that the Facility can be installed with minimal impacts to archaeological resources by incorporating site design and construction methods that minimize the need for soil disturbance and conducting Phase 1B archaeological survey in areas where significant ground disturbance is proposed. In addition to the low-impact nature (relative to other types of energy generation) of utility-scale solar facilities, the Applicant is exploring construction methodologies which will minimize soil disturbance during the construction and maintenance of the Facility. As described above, the proposed PV panels are mounted on racks with a small footprint (in terms of soil disturbance), typically consisting of small I-beam posts driven into the ground. Furthermore, as mentioned above, the Applicant is currently evaluating the feasibility of purchasing the 62.5-acre portion of Flint Mine Hill currently owned by the Southold Indian Museum, to transfer the property into a permanent conservation easement (or similar). The permanent preservation of this significant and unique archaeological site would further mitigate potential impacts to archaeological resources that could result from construction of the proposed Facility.

Construction of the Facility will not require the demolition of physical alteration of any historic buildings or other potential historic resources. No direct physical impacts to aboveground historic resources will occur as a result of the Facility. The APE for Direct Effects will be further refined as project design advances and are discussed in greater detail in the Phase I Archaeological Survey report that has been prepared for the Facility under separate cover.

Indirect Effects

The APE for Indirect Effects on historic resources includes those areas where the Facility may result in indirect effects on cultural resources, such as visual or auditory impacts. The Facility's potential indirect effect on historic resources would be a change (resulting from the introduction of PV panels or other Facility components) in the property's setting. This could theoretically consist of auditory and/or visual impacts; however, industrial scale solar facilities produce minimal noise, so auditory impacts resulting from the proposed Facility are not considered a significant type of impact to the setting of aboveground historic resources. Exhibit 24 of the Article 10 Application (currently being prepared as of the writing of this historic resources survey) will provide visual assessment of the potential impact of the proposed Facility on visually sensitive resources within a 10-mile radius, including an assessment of the extent, duration, and potential need for mitigation measures appropriate to avoid or minimize off-site glare impacts. Therefore, potential visual impacts associated with the proposed Facility are the most significant consideration for defining an APE for Indirect Effects.

The proposed PV panels would be a significant new feature in the visual landscape. Although viewshed analysis indicates potential visibility up to five miles away, the visual effect of the panels will be most apparent in the areas immediately adjacent to the Facility. Although the tallest components of the generating portion of the proposed Facility will be the A-frames on which the substation lightning masts are mounted, which are anticipated to have a maximum height of 75 feet above grade, their slim profile will limit the potential visibility to the areas immediately adjacent to the substation.

A preliminary viewshed analysis for the proposed solar panels and substation was prepared using a digital surface model (DSM) derived from Light Detection and Ranging (lidar) data for parts of Greene and Columbia Counties; the maximum solar panel height of 15 feet; an assumed viewer height of 6 feet; and ESRI ArcGIS® software with the Spatial Analyst extension. Since the specific layout of solar panels is not finalized, sample points representing solar panels were placed 200 feet apart in a grid pattern throughout all developable areas within the Facility parcels.

The DSM includes the elevations of buildings, trees, and other objects large enough to be resolved by lidar technology. Transmission lines that were reflected in these lidar data were removed from the resulting DSM to avoid introducing artificial screening by these features. This DSM was then used as a base layer for the viewshed analysis, which evaluates the existence of a direct, unobstructed line of sight to solar panel sample point location/elevation coordinates from locations throughout the Historic Resources Study Area. After the viewshed analysis was completed a conditional statement was used to set solar panel visibility to zero in locations where the DSM elevation exceeded the bare earth elevation by six feet or more. This was done for two reasons; 1) because in locations where trees or structures are present in the DSM, the viewshed would reflect visibility from the vantage point of standing on the tree top or building roof, which is not the intent of this analysis and 2) to reflect the fact that ground-level vantage points within buildings or areas of vegetation exceeding 6 feet in height will generally be screened from views of the Facility. This viewshed analysis is presented in Figure 3.

It is worth noting that the Facility's APE relative to historic resources may be revised in association with subsequent layout changes during the Article 10 permitting process, and that changes in the layout of the Facility could result in changes in the size of the APE. If any future changes to the preliminary design result in substantive changes to the APE as described in this report, then the revised APE will be described and clarified in the Article 10 Application.

1.4.2 Potential Environmental Impacts

Potential effects of the Facility that may be relevant to consideration of effects on historic properties are summarized below. Impacts from the construction and operation of solar generation are largely the result of the fact that utility-scale solar energy facilities require a large area, or areas, for the collection and distribution of energy. Well-sited solar

energy projects do not result in the significant visual impacts typical of other large-scale energy projects that require tall towers or smokestacks or generate condensate plumes or air pollution. Photovoltaic modules have a low-profile (i.e., typically lower than 12-15 feet in height), which limits their visibility and potential visual effect in terms of the distance from which the modules will be visible. However, the large horizontal areas required to achieve the necessary scale of electrical production for utility-scale solar projects can result in visual impacts for viewers located in areas immediately adjacent to the project, or elevated viewpoints.

The Facility has been intentionally sited on lands that are well screened by surrounding topography and vegetation that will obstruct views of the proposed solar project from most adjacent areas as well as screen the project from longer distance views. Potential visibility of the Facility has been an important consideration in the siting of PV module arrays. Early in the design process, preliminary viewshed analyses were conducted on several PV module layout alternatives in an effort to isolate which portions of the Facility were contributing to visibility that extended beyond the immediate Facility vicinity. Based on the results of that analysis selected locations within the Facility Area were not considered or were subsequently removed from consideration for PV module development due to their visibility. This exercise will be described further as part of the alternatives analysis discussion (Exhibit 9) of the Article 10 Application. The potential visibility of the project is depicted on Figure 3 and further discussed below in Section 1.4 of this report. As shown on that map, areas with potential views of the Facility are for the most part limited to roadways immediately adjacent to the proposed PV arrays. It is anticipated that longer distance views of the Facility will be screened by topography and vegetation from all but a few isolated locations.

Glare

Per NYSOPRHP/SHPO's comments from October 1, 2019 (Bonafide, 2019), glare is frequently raised as a concern for solar PV installations, though these modules are designed to absorb as much of the solar spectrum as possible to maximize energy conversion efficiency. There is an inverse correlation between light absorption and reflection. Consequently, virtually all PV modules installed in recent years have at least one anti-reflective coating to minimize reflection and maximize absorption. Therefore, although frequently raised as a concern, the Applicant asserts that PV modules do not typically produce glare due to a combination of screening and anti-reflective coating. However, Exhibit 24 of the Article 10 Application (currently being prepared as of the writing of this historic resources survey) will provide a visual impact assessment of the proposed Facility, including an assessment of the extent, duration, and potential need for mitigation measures appropriate to avoid or minimize off-site glare impacts. This will include a discussion of potential safety hazards at nearby roadways.

Sound

Similarly, solar modules are the only major energy technology that does not rely on a rotating wound generator as the prime mover, and consequently the modules themselves do not produce any noise. The DC/AC inverters and distributed low voltage to 34.5kV step up transformers, along with the main 34.5/115kV step-up transformer at the substation, can produce a modest humming noise during the day when the solar arrays are generating electricity. However, this noise is generally inaudible at distances greater than 150 feet from the inverters & distributed step up transformers, (Guldberg, 2012) which are typically sited within the interior of each array. This 100 MW-AC solar facility is expected to have approximately 50 such inverters and transformers, installed near the center of each array. Similarly, installing the substation and switchyard away from residential receptors should ensure that the main transformer, which will be similar to the transformers found in other commonplace 34.5/115 kV substations, does not result in significant noise impacts. In addition, some noise will be generated during project construction, and to a lesser extent, during maintenance, primarily from vehicles and equipment operating along access routes and at work areas. However, these are temporary activities that will not typically generate sounds louder than routine noise sources such as farm equipment, lawn mowers and weed whackers and vehicles passing on the road.

2.0 BACKGROUND AND SITE HISTORY

2.1 Historic Research and Consultation with Local Historians

As further described in Section 2.3 of this report, EDR reviewed the CRIS website maintained by NYSOPRHP/SHPO to identify significant historic buildings and/or districts (i.e., properties listed in or determined eligible for listing in the State/National Register of Historic Places), as well as other previously identified historic properties (i.e., cemeteries, bridges, monuments) located within the Historic Resources Study Area.

Archives and repositories consulted during EDR's historic research for the survey included EDR's in-house collection of reference materials, and online digital collections of the New York State Library, Ancestry.com, New York Heritage, David Rumsey Map Collection, and the United States Geological Survey (USGS). Among the sources reviewed for the historic context of the Facility Area and Historic Resources Study Area are the *History of Greene County* (Beers, 1884), *History of Columbia County* (Ellis, 1878), and the *Encyclopedia of New York State* (Eisenstadt, 2005).

Historic maps referenced or reproduced in the report include:

- 1829 Burr *Map of the County of Columbia*
- 1829 Burr *Map of the County of Greene*
- 1867 Beers *Atlas of Greene County*
- 1891 Beers *Atlas of the Hudson River Valley from New York City to Troy*

In addition, EDR reached out to local historians and/or historical organizations seeking input regarding identification of significant resources within the Historic Resources Study Area. Outreach occurred between October 11 and October 18, 2019 via phone, email, and in-person meetings. A summary of outreach conducted is as follows:

- Betty Jean Poole, Village of Athens Historian – An in-person meeting was held at the home of Mrs. Poole on October 16, 2019 during which EDR staff presented maps of the proposed Facility Area and viewshed, and photographs of historic resources that EDR had identified within the APE. Mrs. Poole did not identify any additional historic properties that required survey.
- Michael Rausch, Town of Coxsackie Historian and Jonathan Palmer, Vedder Research Library Archivist – An in-person meeting was held at Vedder Research Library in the Town of Coxsackie on October 16, 2019 during which EDR staff presented maps of the proposed Facility Area and viewshed, and photographs of identified historic resources within the APE. Mr. Palmer and Mr. Rausch identified a residential property and four potential cemetery sites that were not included on the CRIS website. As a result of this meeting, EDR staff completed site visits to these properties, which are summarized in Sections 3.2 and 3.3 below.

- David Dorpfeld, Greene County Historian – Mr. Dorpfeld was reached via telephone on October 18, 2019. EDR staff reviewed the list of identified historic resources within the APE. Mr. Dorpfeld recommended one additional property to investigate, Black Horse Farm (see Section 3.2 below).
- Bob Knighton, President, Greene Land Trust – Corresponded via email on October 17. Mr. Knighton stated that, knowing that EDR had consulted with Jonathan Palmer and David Dorpfeld, he had nothing to add.

In addition, EDR reached out to the following historians in October 2019. As of the date of this report, EDR has not yet discussed the project with these historians; however, the Applicant intends to continue consultation with these stakeholders:

- Lori Yarotsky, Executive Director, Columbia County Historical Society
- Betty June Cure, Village of Coxsackie Historian
- Lynn Brunner, Town of Athens Historian

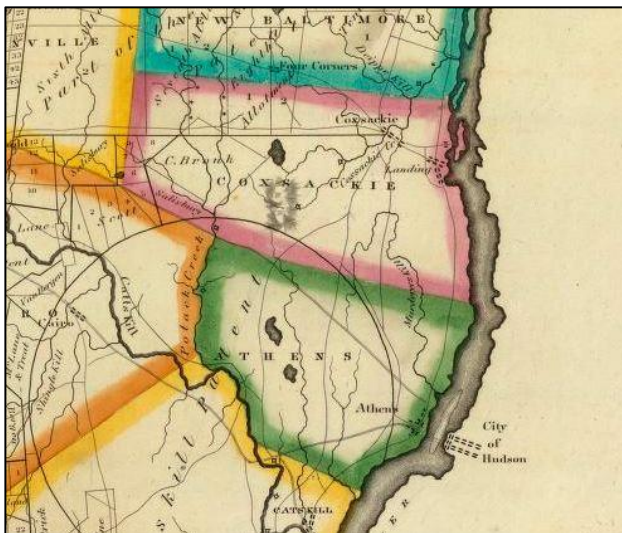
2.2 Historic Context

The Facility is located in the Towns of Athens and Coxsackie, in Greene County, and the Historic Resources Study Area extends into the Towns of Catskill, Cairo, Greenville and New Baltimore, including the Villages of Athens, Coxsackie, and Catskill in Greene County, and the Towns of Greenport, Stockport, and Stuyvesant, including the City of Hudson in Columbia County, New York (see Figure 3).

As noted above, portions of the Facility Area are located within the Flint Mine Hill Archaeological District, which is listed in the National Register of Historic Places. The Facility Area and surrounding vicinity include numerous archaeological sites associated with Pre-Contact period (from approximately 13,000 years ago to approximately 500 years ago). Native American groups exploited the abundant exposures of Mount Merino/Normanskill chert present in the local hills and ridges for stone tool production. These groups also made camps on the flats and lower hills and ridges throughout the area. Pre-Contact archaeological sites in Greene County are attributed to the Mohicans (or Mahikans), or their ancestors, who were present in the area when the first European settlers arrived (Parker, 1922; Beers, 1884a). The Facility's potential effects on Native American archaeological sites will be evaluated in separate (i.e., archaeological survey) reports for the project and are not discussed further herein.

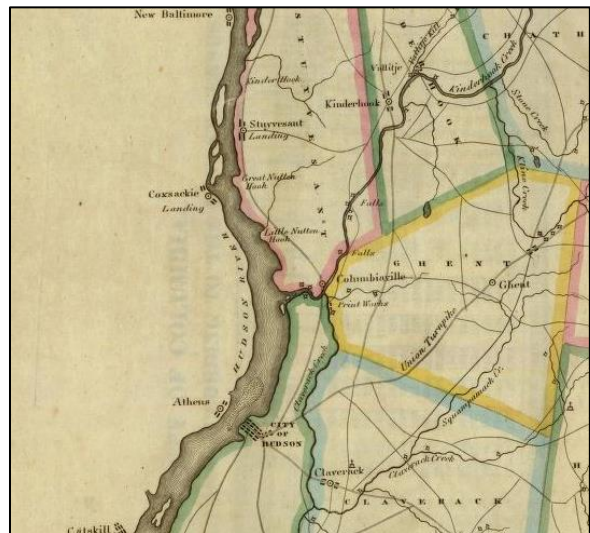
European exploration of the Hudson River began in 1609 when English Captain Henry Hudson sailed at least as far north as what is now the Village of Catskill with a small company on the vessel, the Half-Moon (Ellis, 1878a). European settlement soon followed and initially took the form of purchases, generally of small parcels of land, from Native Americans beginning in the late 1640s. Later, the colonial government disbursed property purchased from Native

Americans in land grants. The eastern portion of Greene County, lying between the Catskill Mountains and the Hudson River, was fertile and accessible, making it appealing to European settlers (Beecher, 2005). The largest and most valuable land in Greene County was the Catskill Patent, which contained 35,500 acres and spanned the present-day towns of Catskill and Athens, extending into the Town of Coxsackie (See Inset 1). This was purchased from the Native Americans by Sylvester Salisbury and Martin Garritsen on July 8th, 1678. Another significant land grant was Bronck's Patent, consisting of 252 acres purchased by Pieter Bronck on June 11, 1667 and located in the western half of the Town of Coxsackie (Beers, 1884b). Patent boundaries are less clear in Columbia County. The Van Hoesen patent was issued to Jan Frans Van Hoesen on May 14, 1667 and included the lands stretching along the Hudson River from just north of the City of Hudson south into the Town of Greenport, and east to Claverack Creek. The land to the north of this patent, as well as several other parcels further upriver around Albany, was originally in the ownership of Killian Van Rensselear. Both the Van Hoesen patent and the Van Rensselear tract would remain in the Van Rensselear family for multiple generations (Ellis, 1878).



Inset 1. 1829 Burr Map of the County of Greene (left)

By 1829, the Villages of Coxsackie and Athens had been established. The area surrounding the Facility was still largely undeveloped, with the land wholly attributed to the Catskill Patent (Burr, 1829a; collections of David Rumsey).

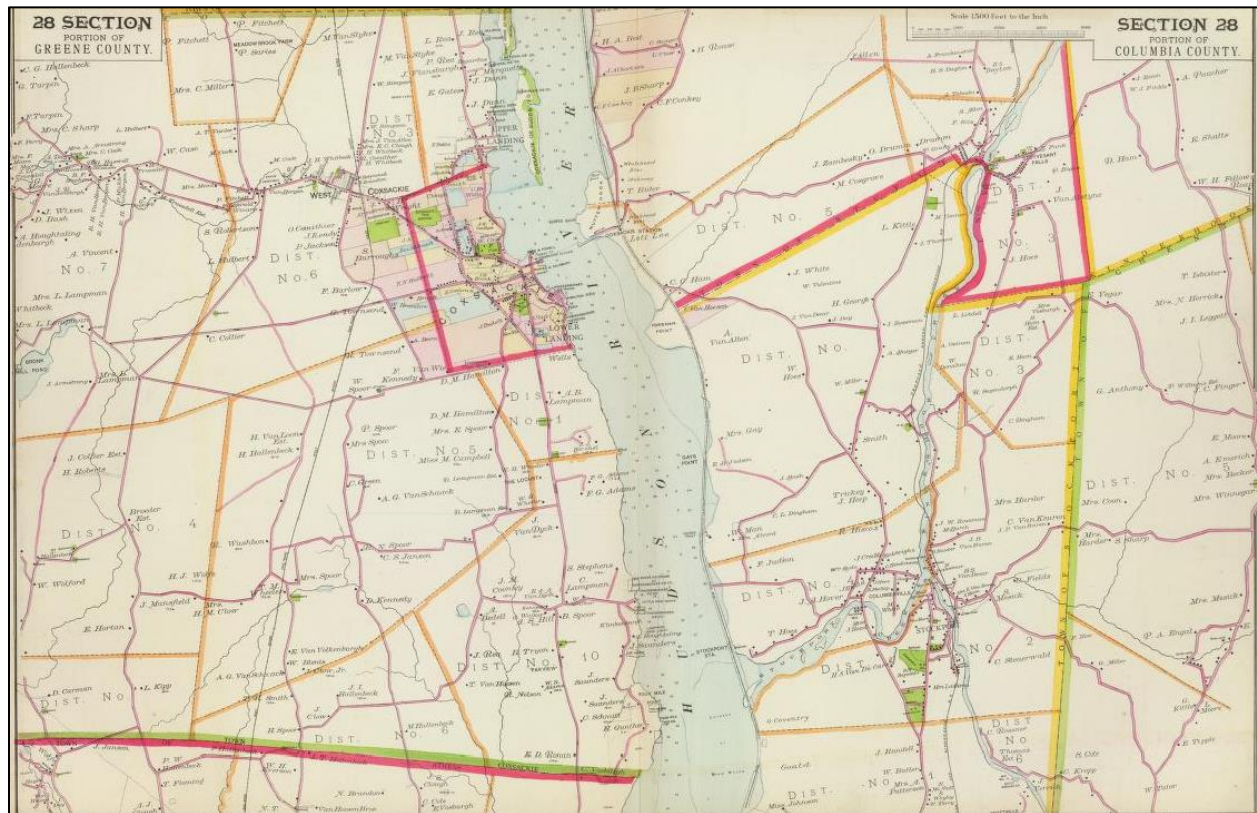


Inset 2. 1829 Burr Map of the County of Columbia (right)

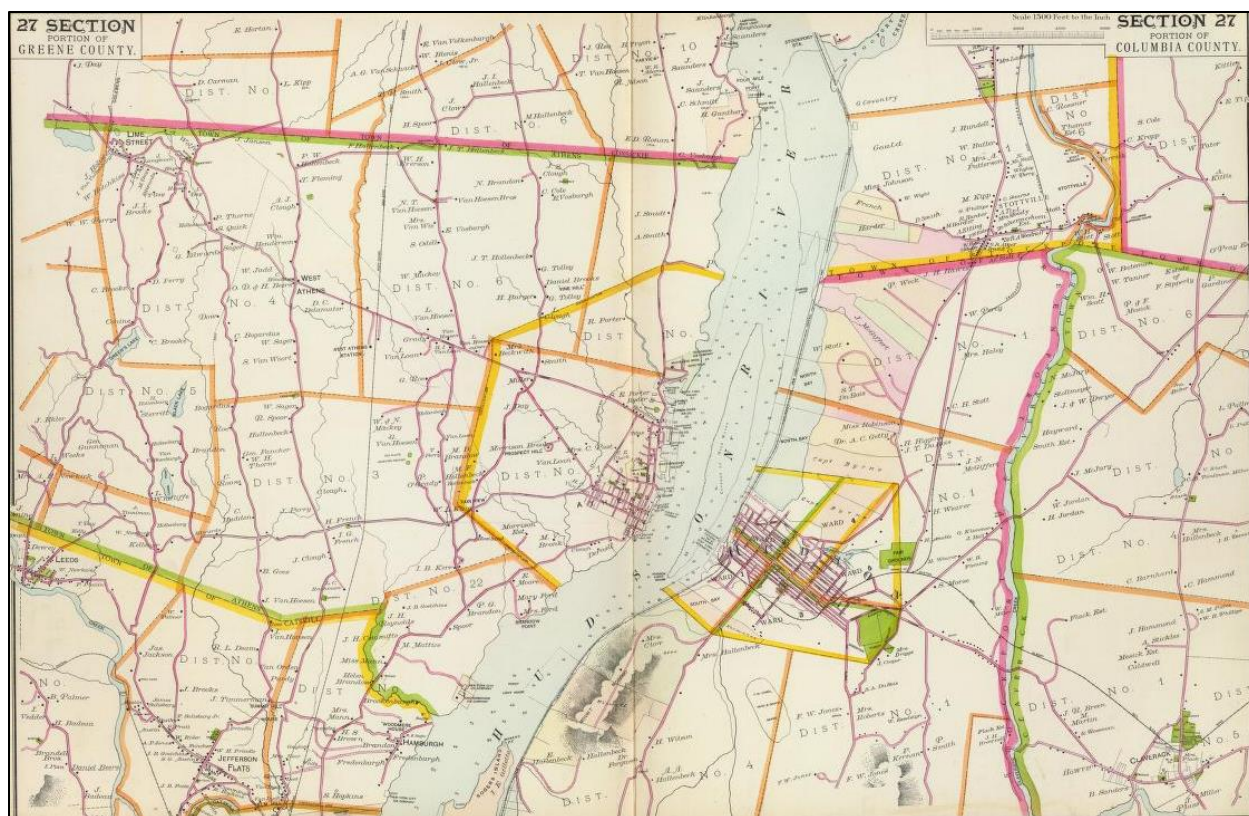
By 1829, the City of Hudson had been established and the Towns of Greenport and Stuyvesant occupied the eastern edge of the Hudson River. The Town of Stockport would not be created for another four years. (Burr, 1829b; collections of David Rumsey).

In the years leading up to the Revolutionary War the development on both sides of the Hudson continued to grow, and when the war brought unrest many landholding loyalists fled, abandoning their property. Following the war most previous land grants were sold as freeholds to incoming New Englanders and growth resumed (Beecher, 2005). By 1850 the population in Greene County had risen to 33,125 and in Columbia County it was 43,073. Both have seen moderate increase in numbers in the years since with estimated totals of 47,470 and 59,916 respectively as of 2018

(USCB 1850, 2018). Easy access to the Hudson River meant that communities in both counties relied on water transportation to move goods and support the economy. Agricultural production included crops of hay, buckwheat, wheat, and grapes; dairy and meat products; and briefly, wool from Merino sheep. Greene County also utilized the river for waterpower opening grist mills, sawmills, tanneries, and factories for stoneware, paper, and iron goods. Quarries supplied stone and brick for construction and street paving. Many of these products were shipped downriver to New York City from the busy local ports, which included Hudson, Athens, Catskill, and Coxsackie. Insets 3 and 4 illustrate the concentration of development on the river in these communities by the late nineteenth century, contrasting with the rural nature moving inland. Additionally, the Hudson River carried people from New York City seeking the rest and relaxation of the countryside. Columbia County capitalized on this trend establishing a few resort hotels and spas that offered access to sulphur springs that were thought to have health benefits (Beecher, 2005; Dunlap, 2005).



Inset 3. 1891 Beers Map of the Hudson River Valley, Section 28



Inset 4. 1891 Beers Map of the Hudson River Valley, Section 27

Insets 3 and 4 cover the eastern portion of the Study Area, showing growth in the riverside communities of Coxsackie, Athens, and Hudson. (Beers, 1891; collections of David Rumsey).

The Facility Area and the majority of the project viewshed are located within the Towns of Athens and Coxsackie. The Town of Athens was formed from portions of Coxsackie and Catskill in 1815. During the nineteenth century it prospered from stoneware production, brickmaking, and shipbuilding. Presently the town is mostly residential with some scattered farms and industry, including a 1000MW natural gas power plant (Horne, 2005a). The Town of Coxsackie was founded in 1788. Leading industries included brickmaking, and metal manufacturing. Notable sites within the town include the S/NRHP-listed Bronck House (also a National Historic Landmark) that dates to 1661, making it one of the oldest sites in the county and important landmark (Horne, 2005b). The Coxsackie Correctional Facility, originally opened as the New York State Vocational Institution at Coxsackie in 1935, is a significant regional resource and institution still in operation. Initially it operated as an educational facility with dorms and classrooms, offering academic and vocational programs. Today it serves as a maximum-security correctional facility (Andress, 2005).

Portions of the Towns of Catskill, Cairo, Greenville, and New Baltimore make up the northern, western, and southern part of the Historic Resources Study Area. The Town of Catskill was first settled in 1650 and incorporated as a town in 1788. Hunting, fishing, and farming were the primary occupations during the nineteenth century, with boarding houses and small resorts catering to tourists located in the hamlets of Kiskatom and Palenville (Horne, 2005c; Barrett, 1925).

The Town of Greenville, originally known as Freehold and Greenfield, was formed in 1803, and has consistently been a rural area with some agricultural use. The town serves as a bedroom community for nearby Albany (Horne, 2005d). The Town of Cairo was formed in 1803 and was originally named Canton. The hamlet of Cairo has been home to the Greene County Agricultural Society since at least 1884, and currently hosts the Greene County Youth Fair, highlighting the region's focus on agriculture (Whittemore, 1884). The Catskill Mountains traverse a large portion of Greene County, with the northeastern foothills passing through Catskill, Cairo, and Greenfield. As such, the region has long been a destination for outdoor recreation, and the topography has resulted in minimal development in the aforementioned towns. The Town of New Baltimore was formed from the Town of Coxsackie in 1811. New Baltimore Landing saw some prosperity early on associated with shipbuilding, but as with other nearby towns today it serves as a residential area for commuters working in Albany and other cities (Horne, 2005e).

The Village of Athens was incorporated in 1805. Located on the river, it was the hub of the area's shipbuilding enterprises (Horne, 2005a). Nearly the entire village is within the bounds of the S/NRHP-listed Athens Lower Village Historic District (90NR00555/03942.000610), which is defined by a high concentration of residences constructed circa 1800-1875.

The Village of Coxsackie was not incorporated until 1867 though it had been an important site as a river landing since after the Revolutionary War. The port served to ship local products, primarily ice, down river to New York City (Horne, 2005b). The S/NRHP-listed Reed Street Historic District (90NR00553/03941.000153) encompasses the area of the principal historic dock (Reed's Landing).

The Village of Catskill was incorporated as a village, and the county seat, in 1806. As a port it grew quickly during the nineteenth century, moving goods from the interior region to the river. Growth slowed as manufacturing died off and other modes of transportation became available for moving goods. The opening of the Rip Van Winkle Bridge in 1935 connected the Village to the east side of the river. Proximity to New York city has made it appealing to weekenders, and the downtown is experiencing a small resurgence. The village is also home to the S/NRHP-listed Thomas Cole House (90NR00549/03940.000462), which was designated a National Historic Landmark in 1965. Cole is considered the founder of the Hudson River School of Painting (Horne, 2005c).

The eastern side of the Historic Resources Study Area consists land across the Hudson River that includes portions of the Towns of Stuyvesant, Stockport, and Greenport. The Town of Stuyvesant was formed from Kinderhook in 1823, and named in honor of Peter Stuyvesant, early governor of the colony that would become New York. As with other settlements in the area early development consisted of industrial mills, mostly paper and cotton. Freight activity was centered around Stuyvesant Landing where there were several docks, warehouses, hotels, and businesses. However,

no significant permanent municipality has survived. During the last 50 years the town has become popular as a bedroom community for Albany due to its close proximity (Ellis, 1878; Eisenstadt, 2005)

The Town of Stockport was formed in 1833 from portions of neighboring Stuyvesant, Ghent, and Hudson and is the smallest town in Columbia County. This section of land is generally elevated, level, and open affording unobstructed views of the Hudson River and beyond. Additionally, it is fed by several water sources and receives ample sun, making it historically agreeable for agriculture (Ellis, 1878). During the early-to mid-nineteenth century Claverack Creek and Kinderhook Creek, converging just north of the hamlet of Stottville, were harnessed for a woolen and paper mills, and the Columbia Springs House operated as a summer retreat.

The Town of Greenport is the newest town in Columbia County, formed in 1837, and entirely surrounds the City of Hudson. The area has consistently seen minimal development, relying on farming and quarries during the nineteenth century (Smith, 1900). Greenport is home to seven properties listed in the S/NRHP, including the Frederic E. Church House (Olana), which is also a National Historic Landmark and New York State Historic Site. Today, Stockport, and Greenport are rural towns made up predominantly of residences, farms, and small businesses.

The City of Hudson was originally known as Claverack Landing. The name was officially changed to Hudson on November 24, 1784, and it was incorporated as a city the following year. The name choice was intended to honor the location as the first place Henry Hudson landed on the river. As a river port one of the earliest industries was shipbuilding, but quickly expanded to include the variety of merchants and manufacturers often associated with a prosperous colonial city (Ellis, 1878). A diverse industrial base led to sustained prosperity and steady growth that continued until the 1930s (USCB, 1930) Since then the city's population has dropped by 50 percent as industry declined, but in recent years it has seen a small resurgence as a tourism destination (Cary, 2016). The city retains a notable number of architecturally significant buildings, including some dating to the late-eighteenth century, that are included in the S/NRHP-listed Hudson Historic District (90NR00252/02140.000907).

2.3 Previously Identified Historic Resources

EDR reviewed the CRIS website maintained by NYSOPRHP/SHPO to identify significant historic buildings and/or districts, as well as other previously identified historic properties (i.e., cemeteries, bridges, monuments) located within the Historic Resources Study Area. The viewshed analysis (described in Section 1.4.1 and depicted in Figures 3-5) was then used to identify above ground historic resources located within the APE for Indirect Effects. This analysis was conducted by using the Spatial Join extension in the ESRI ArcGIS® software to determine which resources within the Historic Resources Study Area were found to fall within the preliminary viewshed, the results of which were then manually reviewed to confirm the location of each resource in areas of potential Facility visibility.

Based on a review of CRIS, a total of seven previously identified historic properties (three S/NRHP-listed properties, one S/NRHP-eligible property, and three properties whose S/NRHP eligibility was previously undetermined) are located within the APE for Indirect Effects. The “Previously Identified Historic Resources” map (see Figure 4) indicates the locations of historic properties within the APE for Indirect Effects and are addressed in further detail in Table 1. It is worth noting that the Facility Area is partially located within the S/NRHP-listed Flint Mine Historic Archaeological District. However, this resource was not evaluated as part of the historic resources survey. Potential effects to this district are addressed in more detail in the archaeological survey report prepared under separate cover.

The S/NRHP-listed properties located within the APE for Indirect Effects are the Frederic E. Church House (Olana), the Moore-Howland Estate, and the Rossman-Prospect Avenue Historic District. Descriptions of these S/NRHP-listed resources are as follows:

- Frederic E. Church House (Olana State Historic Site) (90NR00232/USN 02111.000001⁴) is an approximately 250-acre rural estate with 11 contributing resources located 5720 Route 9G in the Town of Greenport, in the southeastern portion of the APE for Indirect Effects. Sitting high over the Hudson River the property includes the main residence, pump house, garage, cottage, vale house, woodshed, museum building, carriage barn, barn, metal shop, and ruins of a farmhouse, and integral rural landscape features. Olana was built in two phases, from 1870-1872 and 1888-1889, and is significant as the home of Frederick Church, a prominent Hudson River School painter. Church designed the house and resided there with his family until his death in 1900 (Greenwood, 1975). Olana was designated as a National Historic Landmark in 1965, listed in the NRHP in 1966, and in the SRHP in 1980.
- Moore-Howland Estate (10NR06129/USN 03904.000185) is an approximately 50-acre estate that lies just north of the Village of Catskill at 4 Route 385 in the Town of Catskill, in the southern portion of the APE for Indirect Effects. The property is comprised of eight contributing resources built in 1866 and 1900-1901. It is significant as an intact example of a Hudson Valley estate and was listed in the S/NRHP in 2010 (LaFrank, 2010).
- Rossman-Prospect Avenue Historic District (90NR00254/USN 02140.000906⁵) is an approximately five-acre district containing 14 contributing resources on Rossman Avenue and Prospect Avenue at the southeastern edge of the City of Hudson. The district was listed in the S/NRHP in 1985 and consists of a collection of late-nineteenth to early-twentieth century houses built as part of a planned development. The area is significant

4 The S/NRHP listing for Olana includes 11 aboveground resources and one archaeological resource, but for the purposes of the report the resource is treated as a single property.

5 The S/NRHP listing for the Rossman-Prospect Avenue Historic District includes 11 aboveground resources, but for the purposes of the report the resource is treated as a single property.

as an example of a planned neighborhood and of distinct popular architectural styles from the period (Dunn, 1983).

One property located within the APE for Indirect Effects (857 Flats Road, Town of Athens [USN 03905.000056]) has previously been determined S/NRHP-eligible.

In addition, three properties located within the APE for Indirect Effects have no formal determination of S/NRHP eligibility:

- Limestreet Cemetery, Green Lake Road, Town of Athens (no USN)
- St. Mary's Cemetery, State Route 385, Town of Coxsackie (no USN)
- 257 Flats Road, Town of Athens (USN 03902.000090)

The above properties were reviewed in the course of field work and evaluated for potential S/NRHP eligibility. The results of those findings are discussed in greater detail in Section 3.3 and Table 1.

2.4 Previous Historic Resources Surveys within the Study Area

The NYSOPRHP/CRIS database includes two previous historic resource surveys that have been undertaken within the Historic Resources Study Area. These surveys were reviewed for information regarding the overall types of cultural resources found within the Historic Resources Study Area, and to identify cultural resources not identified by the CRIS website.

- The *Coxsackie Correctional Facility, Program Report: Replace Roofs, Buildings 1 & 38* (18SR56131) was completed in 2016 by Oliver Milot, project manager for the NYS Office of General Services, Design & Construction. The purpose of the report was to prepare appropriate designs for the replacement of roof and cupola on Building 1 (Administration Building [USN 03905.000149]) and replace the roof on Building 38, at the Coxsackie Correctional Facility (Milot, 2016).
- The *Columbia County Transmission Project Visual APE Reconnaissance Level Survey* (16SR00792) was completed by New York State Electric and Gas (NYSEG) in 2016 and includes an assessment of 71 properties located in the towns of Claverack, Ghent, Kinderhook, Stockport, and Stuyvesant in Columbia County, New York. The information gathered in this survey is presented in individual Building Inventory Forms with recommendations for S/NRHP eligibility. No comprehensive report was available via CRIS.

3.0 HISTORIC RESOURCES SURVEY RESULTS

3.1 Criteria for Evaluating the Significance of Historic Resources

Historically significant properties are defined herein to include buildings, districts, objects, structures and/or sites that have been listed in the S/NRHP, as well as those properties that NYSOPRHP/SHPO has formally determined are eligible for listing in the S/NRHP. Criteria set forth by the National Park Service for evaluating historic properties (36 CFR 60.4) state that a historic building, district, object, structure or site is significant (i.e., eligible for listing in the S/NRHP) if the property conveys (per CFR, 2004; NPS, 1990):

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (B) that are associated with the lives of persons significant in our past; or
- (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (D) that have yielded, or may be likely to yield, information important in prehistory or history.

The S/NRHP-eligible properties within the APE for Indirect Effects farmsteads and farm residences, cemeteries, and agricultural buildings. These types of resources are typically determined S/NRHP-eligible under S/NRHP Criterion C (i.e., they “embody the distinctive characteristics of a type, period, or method of construction” [CFR, 2004]), and often derive their significance from being representative examples of vernacular nineteenth-century architectural styles that retain their overall integrity of design and materials. Most of the historic farmhouses are Greek Revival, Italianate, or vernacular residences derived from these two styles. In addition, a small number of cemeteries dating to the nineteenth century are located within the APE and have not been previously evaluated by NYSOPRHP/SHPO to determine if they are S/NRHP-eligible. Cemeteries are not typically eligible for listing unless they satisfy S/NRHP Criteria Consideration D which stipulates a cemetery may be eligible “if it derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events” (NPS 1990). The architectural integrity of historic resources throughout the Historic Resources Study Area is highly variable, with many showing noticeable alteration to materials and form, thereby compromising their potential historic integrity and S/NRHP eligibility.

3.2 Historic Resources Survey Methods

The Facility's APE for Indirect Effects is defined in Section 1.4 of this report. The historic resources survey included review of previous historic resources surveys within the survey area (described above in Section 2.4), consultation with NYSOPRHP/SHPO and local stakeholders (described above in Sections 1.3 and 2.1), site visits to identify and evaluate potential historic resources within the APE for Indirect Effects, and supplemental research on specific historic properties (as necessary).

Meetings and consultation with stakeholders yielded recommendations of four cemeteries and two buildings not included on the CRIS website for further investigation:

- Four cemeteries. (Whitbeck Cemetery, Hallenbeck – Hollenback Cemetery, Van Loan – Fowks Cemetery, and an unnamed cemetery on Mud Lane) could not be located.
- The former Black Horse Farm, US Route 9W, Town of Athens, which was determined to be located within the APE and was determined to not meet criteria for listing in the S/NRHP (and therefore is not included in the newly identified resources discussed in Section 3.4). Also known as Black Horse Inn, the site was notable as an early-nineteenth century inn and farm. Subsequent alterations have resulted in the loss of all structures except an 1864 barn, which is presently incorporated into a farm-stand. Due to these changes the historic context of the property is no longer intact.
- A residence located at 2924 Route 385, Town of Athens, is recommended by EDR to be eligible for listing in the S/NRHP and is included in the survey results summarized in Section 3.4 and listed in Table 1.

Historic resources survey fieldwork included systematically walking and/or driving public roads and rights-of-way to photograph and evaluate the S/NRHP eligibility of previously surveyed structures and properties within the APE for Indirect Effects. The historic resources survey fieldwork was conducted on September 12, 2019, September 15, 2019, October 3, 2019, and October 16, 2019. When properties that appeared to satisfy S/NRHP eligibility criteria were identified, the existing conditions of the property were documented by EDR's architectural historians using the ArcGIS Online application software to collect geospatial location data. Photographs of the building(s) (and associated property when necessary) and field notes describing the style, physical characteristics and materials (e.g., number of stories, plan, external siding, roof, foundation, and sash), condition, physical integrity, and other noteworthy characteristics were recorded for each resource. EDR's evaluation of historic resources within the Historic Resources Study Area focused on the physical condition and integrity (with respect to design, materials, feeling, and association) to assess the potential architectural significance of each resource.

Note that all properties included in the historic resources survey were photographed and assessed from public rights-of-way. The condition and integrity of all resources were evaluated based solely on the visible exterior of the structures. No inspections or evaluations requiring access to the interior of buildings, or any portion of private property, were conducted as part of this assessment. In accordance with the *SHPO Wind Guidelines*, buildings that were not sufficiently old (i.e., are less than 50 years in age), that lacked historic or architectural integrity, or have been evaluated by EDR's architectural historians as lacking historical or architectural significance were *not* included in or documented during the survey. In addition, addresses have been updated to reflect current parcel data obtained from the Greene County Real Property Tax Services Department and Columbia County Real Property Tax Services Agency.

3.3 Evaluation of Previously Identified Historic Resources

A total of seven previously identified historic resources were identified within the APE for Indirect Effects using the CRIS website (see Section 2.3). As described in Section 3.2, EDR staff reviewed each of these properties as part of historic resources fieldwork to document their current condition and evaluate their eligibility relative to S/NRHP eligibility criteria. The results of the historic resources survey are presented below.

National Historic Landmarks, S/NRHP-Listed Properties/Districts, and S/NRHP-Eligible Districts

No change is recommended by EDR for the three S/NRHP-listed properties within the APE for Indirect Effects:

- The Frederic E. Church (Olana) National Historic Landmark/State Historic Site (5720 State Route 9G [90NR00232/ USN 02111.000001])
- Moore-Howland Estate (4 State Route 385 [10NR06129/USN 03904.000185])
- Rossman-Prospect Ave Historic District (Rossman and Prospect Avenues [90NR00254/USN 02140.000906])⁶

The Facility Area is partially located within the S/NRHP-listed Flint Mine Historic Archaeological District; however, potential effects to this district are addressed in more detail in the archaeological survey report prepared under separate cover.

S/NRHP-Eligible Properties

One property within the APE for Indirect Effects previously determined S/NRHP-eligible by NYSOPRHP (857 Flats Road [USN 03905.000056]) is recommended by EDR to not meet S/NRHP eligibility criteria.

⁶ Although the viewshed analysis determined that from this historic district toward the Facility would be heavily screened, it was included as part of the historic resources survey results due to the partial view toward the Facility as well as a representative view from the City of Hudson.

S/NRHP Undetermined Properties

Of the three properties for which there is no formal S/NRHP eligibility determination:

- Two properties are recommended by EDR to meet S/NRHP eligibility criteria (Limestreet Cemetery [no USN] and (St. Mary's Cemetery [no USN])
- One property is recommended to be not meet S/NRHP eligibility criteria (257 Flats Road [USN 03902.000090])

Locally Identified Properties

Six properties were identified through consultation with local stakeholders:

- One property not included in CRIS (2924 State Route 385) is recommended by EDR to be eligible for listing in the S/NRHP.
- One property not included in CRIS (the former Black Horse Farm, US Route 9W) does not appear to meet S/NRHP eligibility criteria and is not recommended by EDR to be eligible for listing in the S/NRHP. The house/inn was demolished between 1956 and 1994, and the remaining barn has been incorporated into a farm stand.
- Four cemeteries not included in CRIS could not be located. They lacked sufficient addresses or other location information and are likely on private property, and were not visible/apparent from public rights-of-way:
 - Whitbeck Cemetery
 - Hallenbeck – Hollenbeck Cemetery
 - Van Loan – Fowkes Cemetery
 - Unnamed cemetery

3.4 Newly Identified Historic Resources

In addition to the previously identified historic resources, EDR identified seven properties within the APE for Indirect Effects that had not been previously surveyed, for a total of 14 historic properties identified in this survey report. These eight newly surveyed properties are recommended by EDR to meet S/NRHP eligibility criteria and are comprised of cemeteries, residences and farmsteads with intact agricultural buildings and residences in a rural setting that retain a high level of integrity.

The results of the historic resources survey are listed in Table 1. These results include updated recommendations of S/NRHP eligibility for previously identified historic resources, as well as recommendations of eligibility for newly surveyed properties. The locations of all resources surveyed are depicted on Figure 5, with photographs included as Appendix B.

Table 1. Historic Resources Survey Results

Survey ID	Resource Identification Number	Address	Name and/or Description	Municipality	County	S/NRHP Eligibility Determination (NYSOPRHP)	Recommendation of S/NRHP Eligibility (EDR)	Distance to Facility Area (Miles)
1	N/A	576 & 580 Flint Mine Road	An historic farmstead consisting of a two-story vernacular residence and two barns.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	0
2	NA	2924 State Route 385	A two-and-one-half-story Colonial Revival residence with a guest house and several accessory structures.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	1.6
3	NA	State Route 385	An approximately six-acre cemetery with an estimated 1,000 headstones, circa 1874 (St. Mary's Cemetery).	Town of Coxsackie	Greene	S/NRHP Eligibility Undetermined	S/NRHP-Eligible (EDR Recommended)	1.6
4	N/A	987 County Route 49	An historic farmstead consisting of a two-story vernacular residence and a barn.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	<0.1 (294 feet)
5	N/A	1199 Flint Mine Road	A one-and-one-half-story bungalow.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	<0.1 (75 feet)
6	N/A	880 Flint Mine Road	An historic farmstead consisting of a one-and-one-half-story Greek Revival-style residence and two barns.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	<0.1 (159 feet)
7	N/A	957 Flats Road	An historic farmstead consisting of a one-and-one-half-story stone residence, a hay barn, a shed, and two silos.	Town of Coxsackie	Greene	N/A	S/NRHP-Eligible (EDR Recommended)	<0.1 (81 feet)
8	N/A	Green Lake Road	An approximately 2-acre cemetery with an estimated 975 headstones, established circa 1816 (Limestreet Cemetery [also known as Chapell Cemetery, Colleburgh Cemetery]).	Town of Athens	Greene	S/NRHP Eligibility Undetermined	S/NRHP-Eligible (EDR Recommended)	0.2 (1,068 feet)

Survey ID	Resource Identification Number	Address	Name and/or Description	Municipality	County	S/NRHP Eligibility Determination (NYSOPRHP)	Recommendation of S/NRHP Eligibility (EDR)	Distance to Facility Area (Miles)
9	03905.000056	857 Flats Road	Marns Farm, a farm complex with an original Dutch barn.	Town of Coxsackie	Greene	S/NRHP-Eligible (NYSOPRHP Determined)	Not S/NRHP Eligible (EDR Recommended)	<0.1 (58 feet)
10	03902.000090	275 Flats Road	Structure #43, a two-story modular residence.	Town of Athens	Greene	S/NRHP Eligibility Undetermined	Not S/NRHP Eligible (EDR Recommended)	0.5 (2,408 feet)
11	90NR00254/ USN 02140.000906	Prospect and Rossman Aves.	Rossmann-Prospect Avenue Historic District	City of Hudson	Columbia	S/NRHP-Listed Resource	S/NRHP-Listed Resource	4.5
12	N/A	4414 US Route 9	A two-story Greek Revival-style residence.	Town of Greenport	Columbia	N/A	S/NRHP-Eligible (EDR Recommended)	4.6
13	10NR06129/ USN 03904.000185	4 State Route 385	Moore-Howland Estate	Town of Catskill	Greene	S/NRHP-Listed Resource	S/NRHP-Listed Resource	4.1
14	90NR00232/ USN 02111.000001	5720 State Route 9G	Frederic E. Church House (Olana)	Town of Greenport	Columbia	National Historic Landmark	National Historic Landmark	4.9

4.0 SUMMARY

4.1 Summary of Historic Resources Survey

On behalf of Flint Mine Solar, LLC, EDR has prepared a Historic Resources Survey Report for the proposed Flint Mine Solar Facility, located in the Towns of Coxsackie and Athens, Greene County, New York.

A total of 14 resources were inventoried as part of the historic resources survey. The results of the survey are summarized as follows:

- Three S/NRHP-listed properties (one of which is also a National Historic Landmark and New York State Historic Site) are located within the APE; no change in status is recommended by EDR for these three properties.
- A total of nine properties are recommended by EDR to meet S/NRHP eligibility criteria.
- A total of two properties are recommended by EDR to be not meet S/NRHP eligibility criteria.

The Facility Area is partially located within the S/NRHP-listed Flint Mine Historic Archaeological District. Potential effects to this district are addressed in more detail in the archaeological survey report prepared under separate cover.

The complete results of the historic resources survey are listed in a table provided as Table 1. These results include updated recommendations of S/NRHP eligibility for previously identified historic resources, as well as recommendations of eligibility for newly surveyed properties. The locations of all resources surveyed are depicted on Figure 5, with photographs included as Appendix B.

In addition to the documentation provided in this report, narrative descriptions and photographs for each historic property identified in the survey have been entered in to NYSOPRHP/SHPO's on-line CRIS portal for review by NYSOPRHP/SHPO staff, along with a spreadsheet of all properties assessed as part of this survey.

4.2 Evaluation of the Facility's Potential Effect on Historic Resources

Construction of the Facility will not require the demolition or physical alteration of any historic buildings or other potential historic resources. No direct physical impacts to historic resources will occur because of the Facility. No further historic resource surveys are recommended for the Facility.

Per the requirements of 16 NYCRR 1001.24(b)(4)(vi), the historic resources survey will assist with the identification of visually sensitive sites and key viewpoints for the development of visual simulations, to be included in Exhibit 24 (Visual Impacts) of the Article 10 Application (which is currently being prepared as of the writing of this historic resources

survey). EDR is requesting that NYSOPRHP/SHPO review the results of this historic resources survey report and provide determinations of eligibility. Following receipt of comments from NYSOPRHP/SHPO, EDR will evaluate the potential visual effects of the Facility on those historic properties determined to be NRHP-eligible by NYSOPRHP/SHPO.

A discussion of the Facility's potential visual effect on historic properties will be included as part of Exhibit 24 (Visual Impacts) of the Article 10 Application. This will include consideration of the project's potential visual effect on Olana, the Olana Scenic Area of Statewide Significance (or, Olana SASS), the site of the former Catskill Mountain House (North-South Lake Park, Haines Falls, NY) as well as a glare analysis, per the comments received from John Bonafide, Director, Technical Preservation Services Bureau, on October 1, 2019 (Bonafide, 2019; see also correspondence from NYSDPS, 2018, 2019; Scenic Hudson, 2019; see Section 1.3 of this report and Appendix A).

In addition, the historic resources survey report and subsequent visual effects information to be included in the Article 10 Application will provide the basis for ongoing consultation with NYSOPRHP/SHPO (and other applicable consulting parties) regarding avoidance, minimization, and/or potential mitigation for visual and auditory impacts of the Facility on aboveground historic resources. The Applicant anticipates that this consultation will continue through the Article 10 process and that NYSOPRHP's/SHPO's evaluation regarding potential effects and/or identification of any required mitigation will be determined as part of the U.S. Army Corps of Engineer's review of the Project under Section 106 of the National Historic Preservation Act. Section 106 review would be triggered by submission of a Joint Application for Permit, which is anticipated to occur following the submission of the Article 10 Application. Therefore, SHPO's determination of potential effects and any subsequent discussion of proposed mitigation measures, if necessary, is not anticipated to be included in the Article 10 Application.

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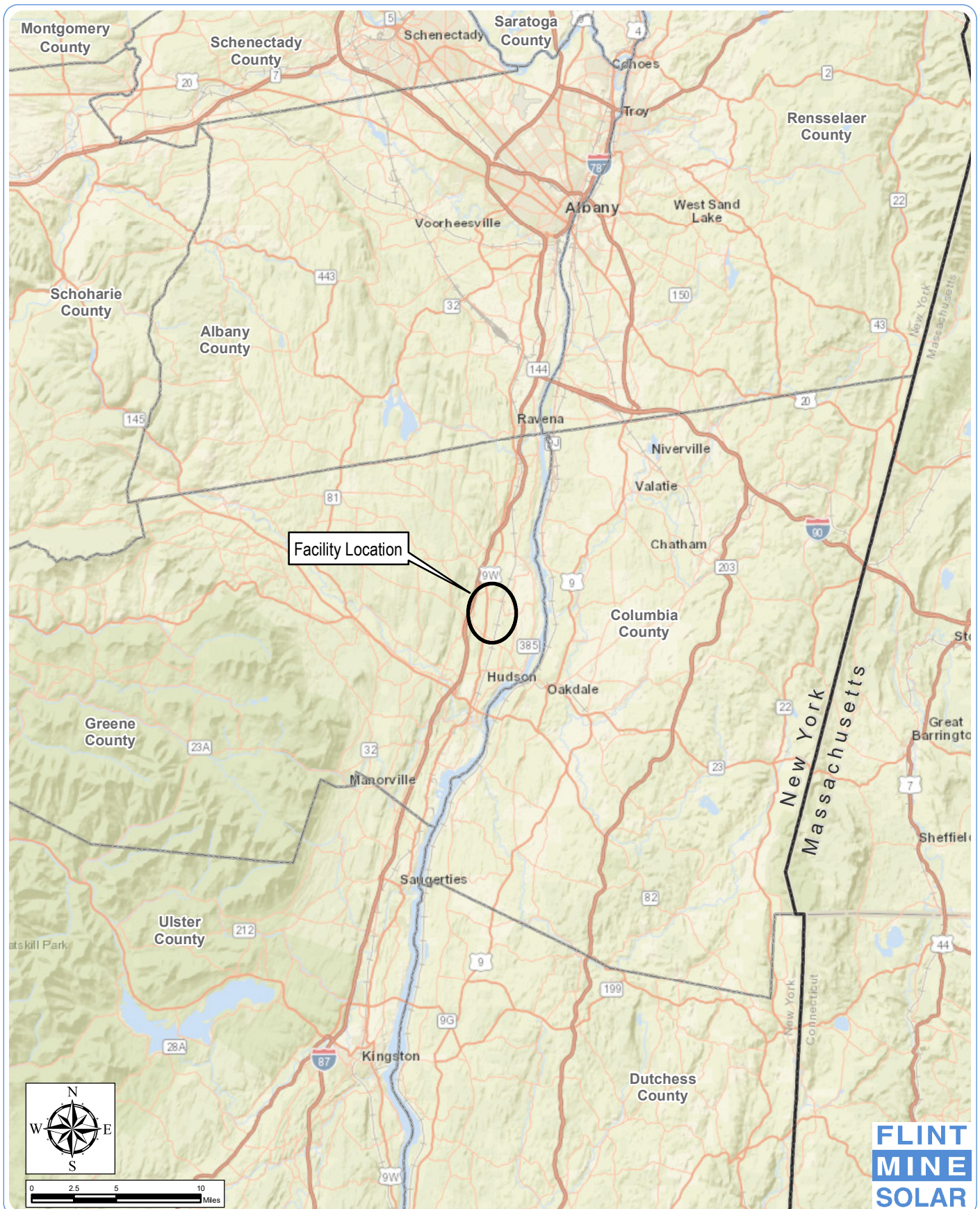
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Figures



Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

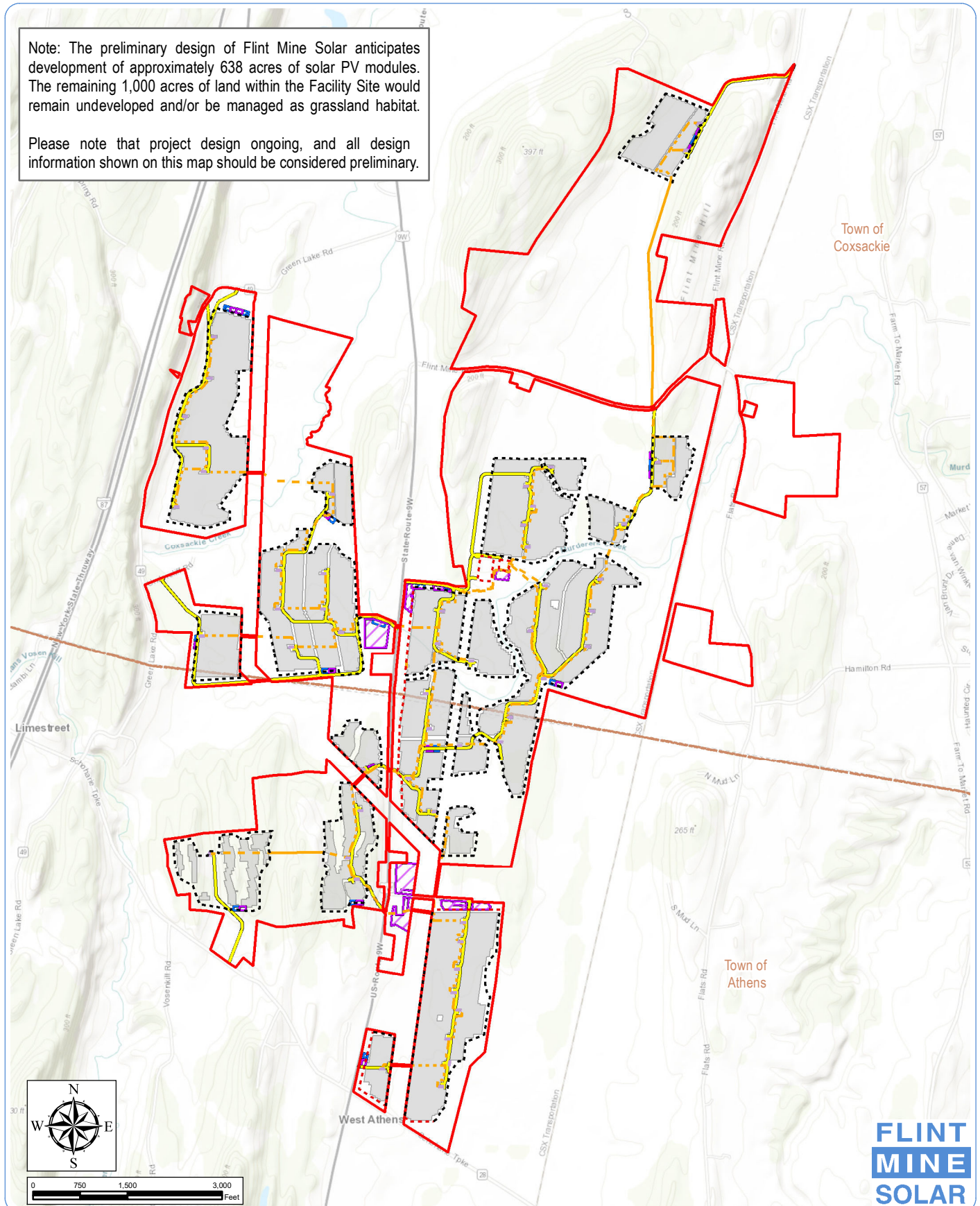
Figure 1: Regional Facility Location

Notes: 1. Basemap: ESRI ArcGIS Online "World Street Map" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 17, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



Note: The preliminary design of Flint Mine Solar anticipates development of approximately 638 acres of solar PV modules. The remaining 1,000 acres of land within the Facility Site would remain undeveloped and/or be managed as grassland habitat.

Please note that project design ongoing, and all design information shown on this map should be considered preliminary.



Flint Mine Solar

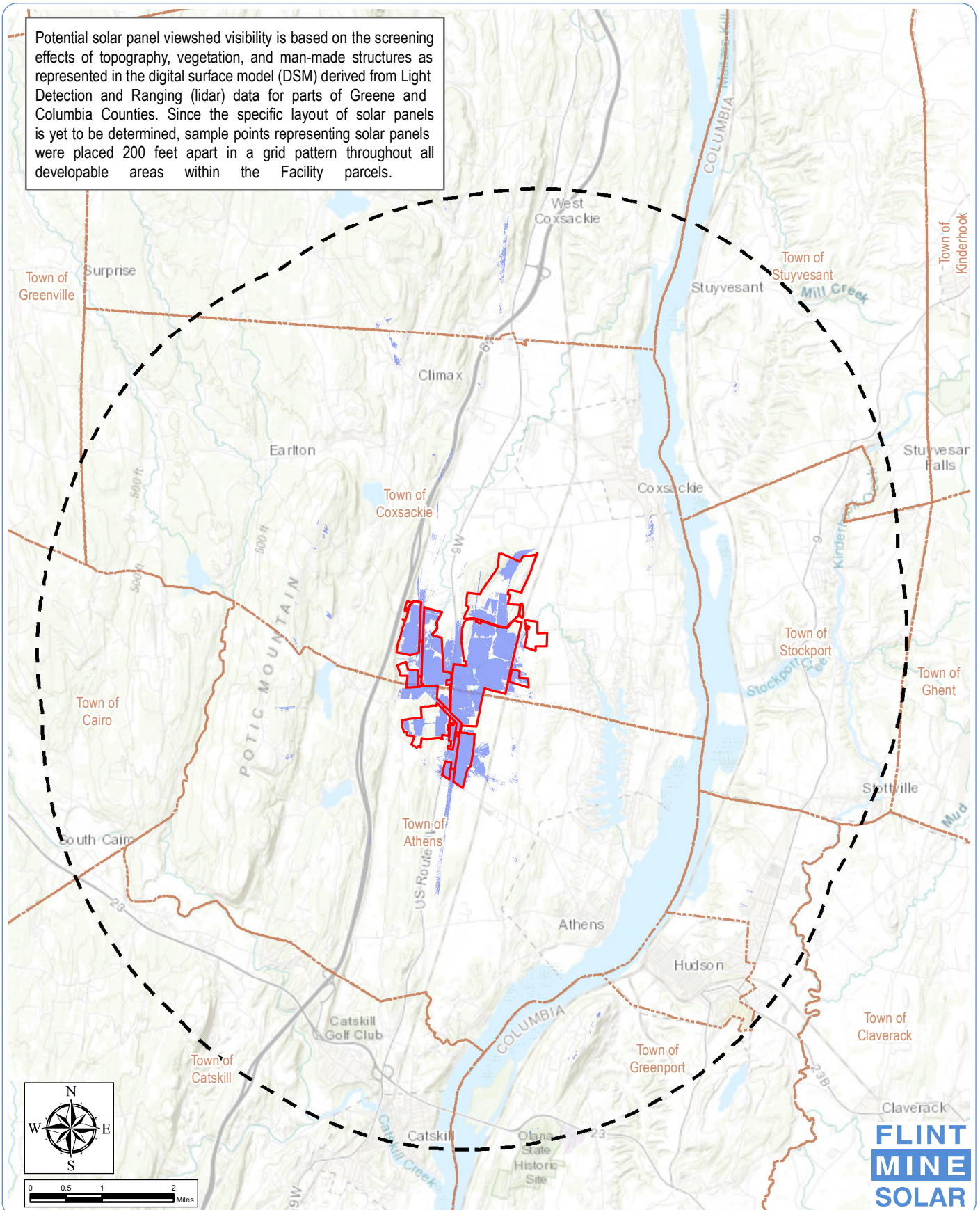
Towns of Coxsackie and Athens, Greene County, New York

Figure 2: Proposed Facility Layout

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 21, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- | | | |
|--------------------------------|-----------------------|-------------------|
| — Access Driveway | ■ PV Module Layout | --- Town Boundary |
| - - - Buried Collection Line | ■ Equipment Pad | — Facility Area |
| ... Messenger Supported Wiring | ■ POI Substation | |
| — Overhead Collection Line | ■ Switchyard | |
| - - - High Security Fence | ■ Laydown Area | |
| - - - Wildlife Friendly Fence | ■ Gravel Laydown Area | |

Potential solar panel viewshed visibility is based on the screening effects of topography, vegetation, and man-made structures as represented in the digital surface model (DSM) derived from Light Detection and Ranging (lidar) data for parts of Greene and Columbia Counties. Since the specific layout of solar panels is yet to be determined, sample points representing solar panels were placed 200 feet apart in a grid pattern throughout all developable areas within the Facility parcels.



Flint Mine Solar

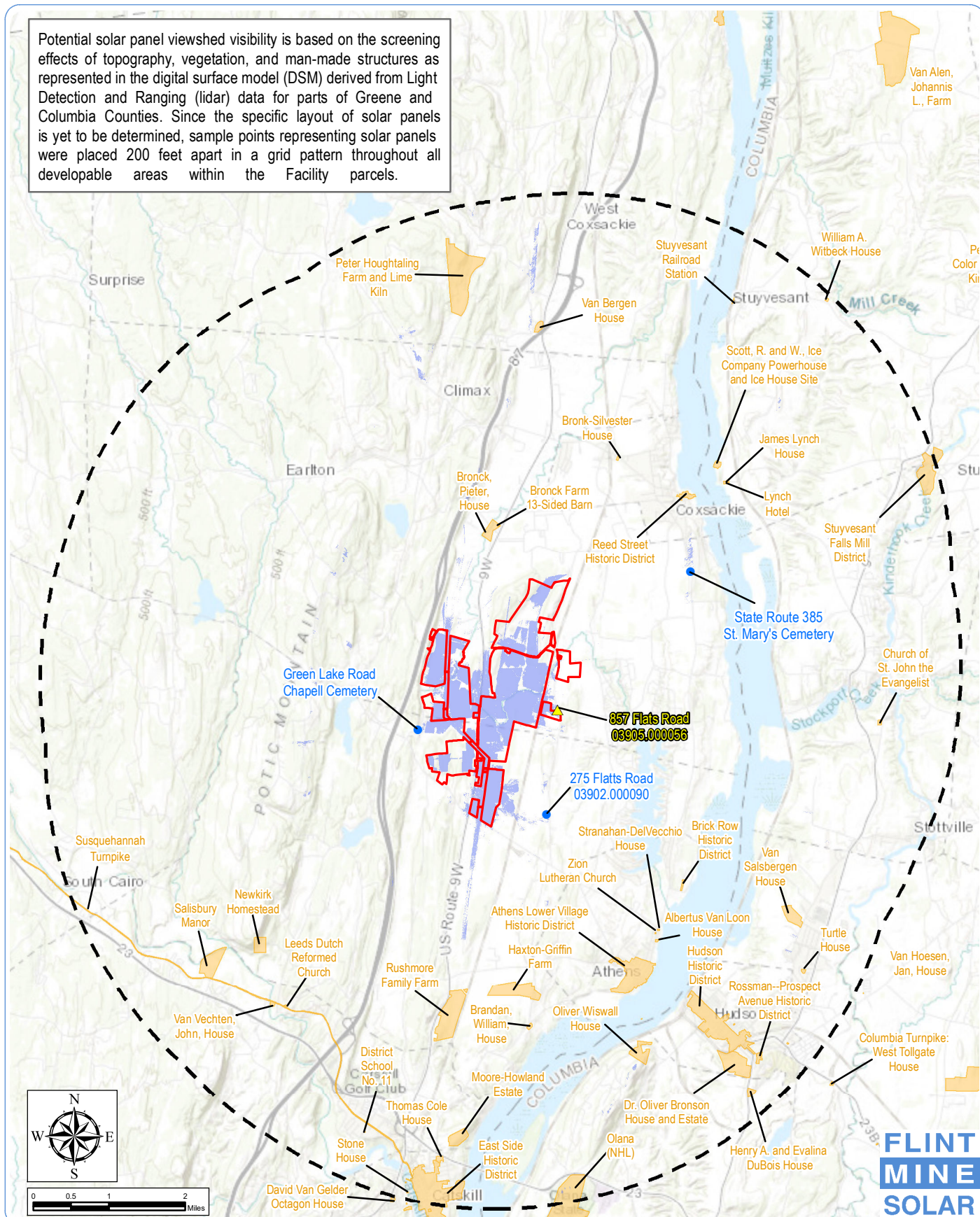
Towns of Coxsackie and Athens, Greene County, New York

Figure 3: Area of Potential Effect for Indirect Effects

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 21, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Area of Potential Effect (APE) for Indirect Effects
- Historic Resources Study Area
- Facility Area
- Town Boundary

Potential solar panel viewshed visibility is based on the screening effects of topography, vegetation, and man-made structures as represented in the digital surface model (DSM) derived from Light Detection and Ranging (lidar) data for parts of Greene and Columbia Counties. Since the specific layout of solar panels is yet to be determined, sample points representing solar panels were placed 200 feet apart in a grid pattern throughout all developable areas within the Facility parcels.



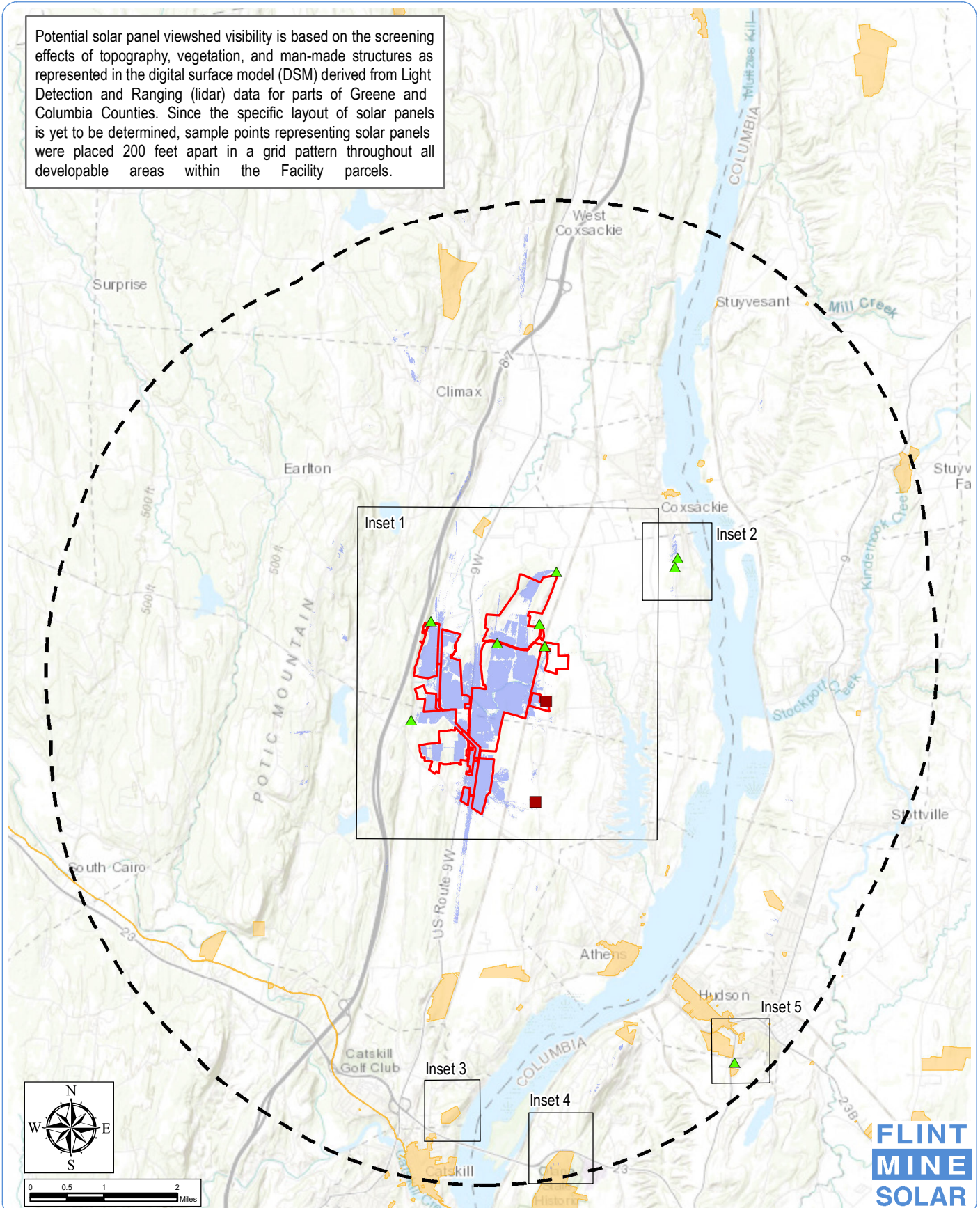
Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Figure 4: Previously Identified Historic Resources Within Historic Resources Study Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 20, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Potential solar panel viewshed visibility is based on the screening effects of topography, vegetation, and man-made structures as represented in the digital surface model (DSM) derived from Light Detection and Ranging (lidar) data for parts of Greene and Columbia Counties. Since the specific layout of solar panels is yet to be determined, sample points representing solar panels were placed 200 feet apart in a grid pattern throughout all developable areas within the Facility parcels.



Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Figure 5: Historic Resources Survey Results - Index

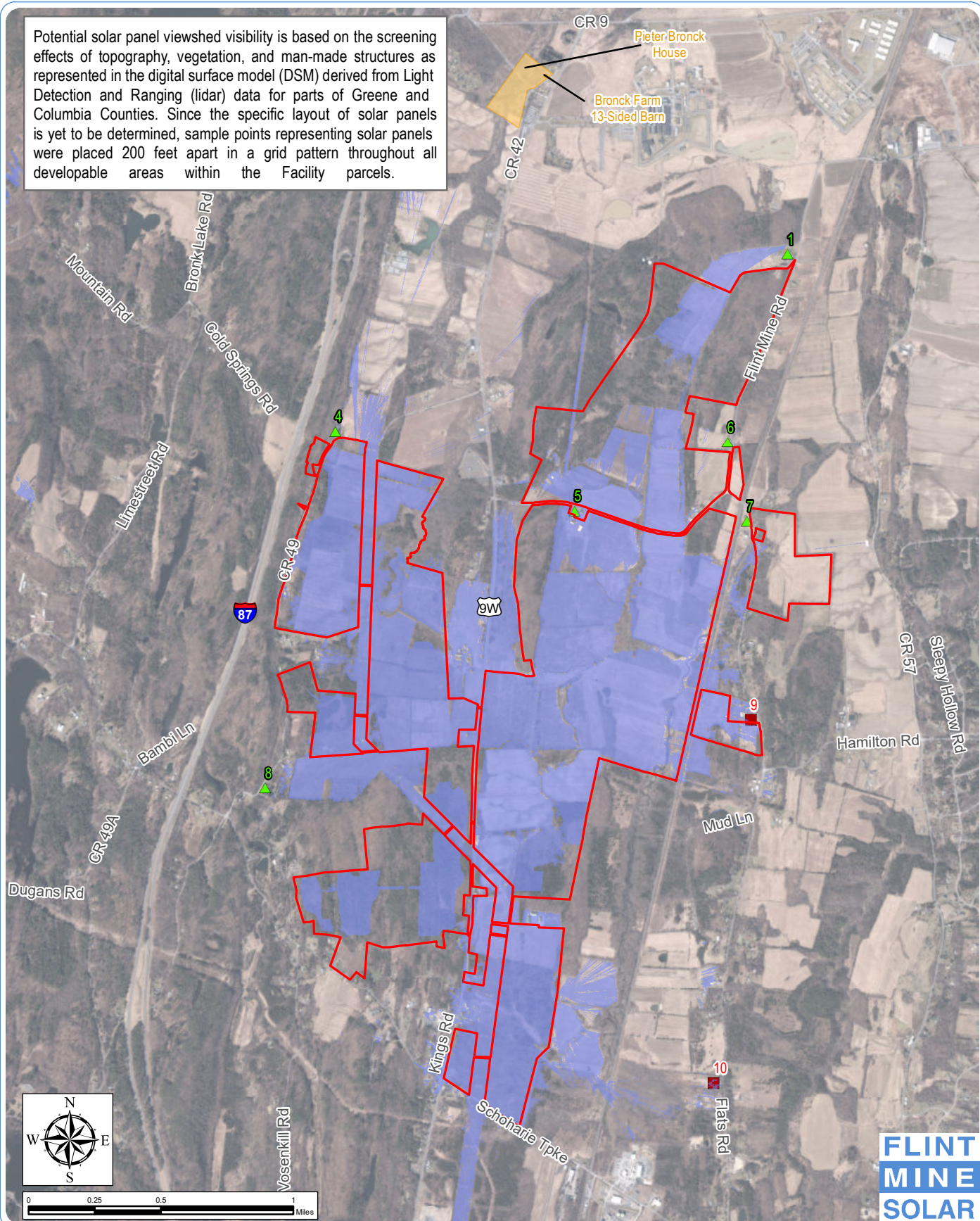
Notes: 1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 20, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Historic Resource Surveyed

- ▲ S/NRHP-Eligible Resource (EDR Recommended)
- Not S/NRHP Eligible (EDR Recommended)
- S/NRHP-Listed Resource

- Area of Potential Effect (APE) for Indirect Effects
- Facility Area
- Historic Resources Study Area

Potential solar panel viewshed visibility is based on the screening effects of topography, vegetation, and man-made structures as represented in the digital surface model (DSM) derived from Light Detection and Ranging (lidar) data for parts of Greene and Columbia Counties. Since the specific layout of solar panels is yet to be determined, sample points representing solar panels were placed 200 feet apart in a grid pattern throughout all developable areas within the Facility parcels.



Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Figure 5: Historic Resources Survey Results - Inset 1

Notes: 1. Basemap: ESRI ArcGIS Online "World Imagery" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 17, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Historic Resource Surveyed

▲ S/NRHP-Eligible Resource (EDR Recommended)

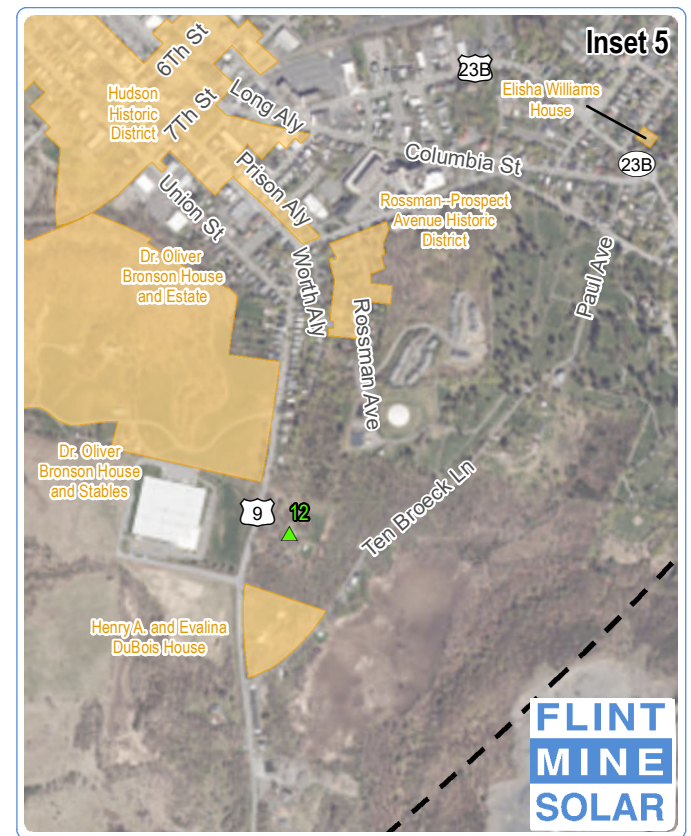
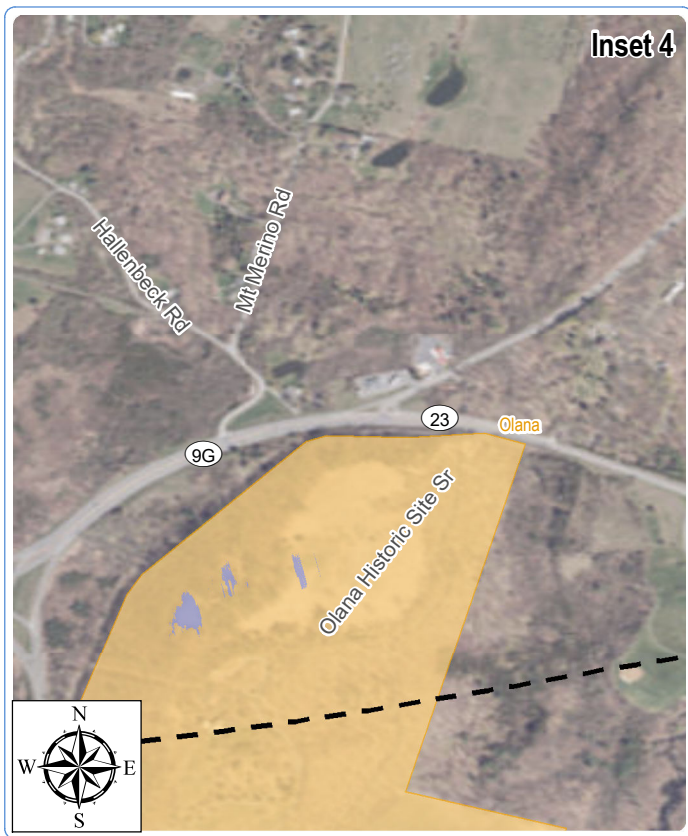
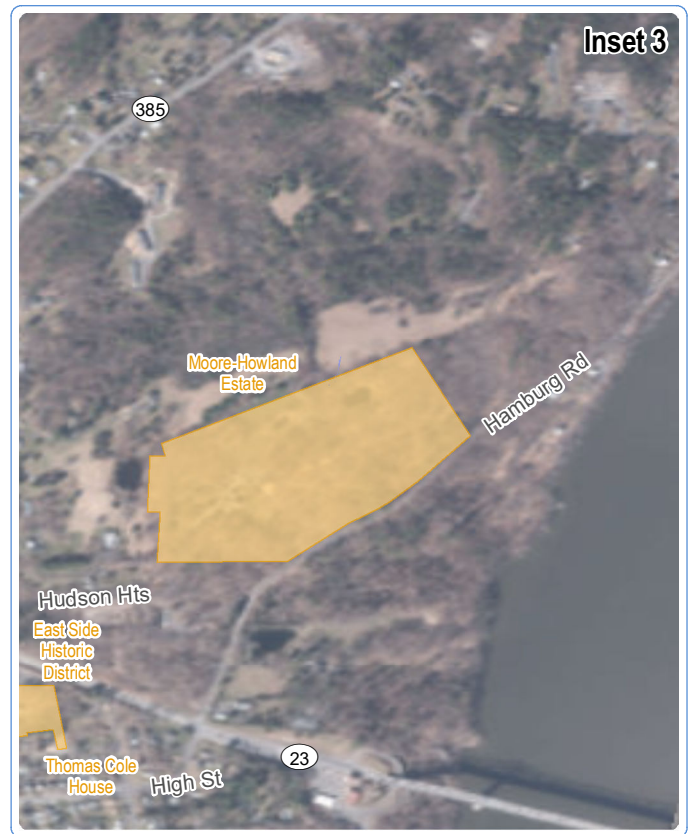
■ Not S/NRHP Eligible (EDR Recommended)

■ S/NRHP-Listed Resource

■ Area of Potential Effect (APE) for Indirect Effects

■ Facility Area

■ Historic Resources Study Area



Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Figure 5: Historic Resources Survey Results - Insets 2-5

Notes: 1. Basemap: ESRI ArcGIS Online "World Imagery" map service. 2. This map was generated in ArcMap by Environmental Design and Research on February 17, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

Historic Resource Surveyed

▲ S/NRHP-Eligible Resource (EDR Recommended)

■ Not S/NRHP Eligible (EDR Recommended)

■ S/NRHP-Listed Resource

■ Area of Potential Effect (APE) for Indirect Effects

■ Facility Area

--- Historic Resources Study Area

Appendix A:
NYSOPRHP/SHPO and Article 10 Correspondence



Department of Public Service

Public Service Commission

John B. Rhodes
Chair and
Chief Executive Officer

Gregg C. Sayre
Diane X. Burman
James S. Alesi
Commissioners

Thomas Congdon
Deputy Chair and
Executive Deputy

John Sipos
Acting General Counsel

Kathleen H. Burgess
Secretary

Three Empire State Plaza, Albany, NY 12223-1350
www.dps.ny.gov

December 3, 2018

VIA EMAIL

Mr. Patrick Doyle
Flint Mine Solar LLC
2021 Western Ave., Suite 105A
Albany, NY 12203
Info@HudsonEnergyDev.com

Re: Case 18-F-0087 – Application of Flint Mine Solar LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for Construction of a Solar Electric Generating Facility Located in the Towns of Cossackie and Athens, Greene County.

Dear Mr. Doyle:

It has come to our attention that an outdated, incorrect version of the Staff of the New York State Department of Public Service (DPS Staff) PSS Comments were inadvertently attached to Staff's letter dated November 30, 2018.

Accordingly, DPS Staff submits the attached corrected comments to replace those submitted on November 30, 2018, pursuant to 16 NYCRR §1000.5(g) and the Notice extending the Deadline for Submitting Comments issued on November 9, 2018.

If you have any questions, please contact either Heather Behnke by phone at (518) 474-5474 or by email at Heather.Behnke@dps.ny.gov, or David Solimeno at (518) 486-6764 or David.Solimeno@dps.ny.gov, respectively.

/s/
Heather Behnke
Assistant Counsel

/s/
David Solimeno
Excelsior Fellow

cc: (via e-mail): Kathleen H. Burgess, Secretary to the Commission
Party List

CASE 18-F-0087 - Flint Mine Solar LLC
Preliminary Scoping Statement
Comments of the Staff of the
New York State Department of Public Service

GENERAL COMMENTS

1. In addition to the specific comments on many topics below, DPS Staff advises that the Application must also contain all of the informational requirements included in 16 NYCRR §1001.1 et seq.
2. Terminology used in pre-application and future application phases should be standardized.
3. The Application should provide a list of acronyms as an appendix to the Table of Contents.
4. The Application should be carefully reviewed to ensure that all reference citations within the body of any exhibit are fully cited at the relevant list of reference documents. (Note: The PSS document is missing some referenced documents.)
5. GIS shapefiles of the Facility Area, preliminary Facility locations, and related resource information should be provided to DPS Staff for review during the scoping and stipulation process.
6. DPS Staff requests that GIS shapefiles of Facility component and site locations, property lines, environmental data, visual and cultural resource locations, and related analyses derived from such data and utilized in development of the Application and mapping, be provided directly to DPS Staff at the time the Application is filed.

EXHIBIT-SPECIFIC COMMENTS

Exhibit 2 – Overview and Public Involvement Summary

Section 2.2.1 – Discussion

1. The Applicant states that the updated Master Stakeholder List is included in Appendix D. The list provided does not include the anonymized list of host and adjacent landowners.

Section 2.12(d) – Procedures for Addressing Public Complaints and Disputes

1. The Complaint Resolution Plan should be expanded to describe a procedure for review and transmittal of complaints, updates, and plans for resolution to DPS Staff.

Appendix C – Master List of Stakeholders

1. This list should include:
 - Kathleen H. Burgess, Secretary to the Commission
 - Point of contact for each stakeholder
 - Stakeholders list with individuals and organizations that are on the service list in DMM

Appendix D – Meeting Log

1. The log should provide a summary of questions asked at outreach events and meetings. The Applicant should indicate how it addressed or plans to address the questions.

Exhibit 3 – Facility Location

Section 2.3.2 (a) – Topographic Maps

1. The topographic maps specified in this section should be:
 - a. reproduced at 1:24,000 scale.
 - b. Facility component locations should be clearly visible;
 - c. Maps should allow discernment of municipal boundaries, as called for in 16 NYCRR §1001.3(b), including the Town of Athens and Coeymans boundary crossing through the Facility Area (which is indicated but is not labeled, in PSS Figure 2, Figures Appendix);
 - d. Facility Location Maps should be provided in larger format to show areas nearby to the Facility Site but outside of the Site footprint and should show access to major roadways likely to be used as access routes for Facility construction.
2. The indication of the point-of-interconnection (POI) substation/switchyard appears to be remote from public roads. DPS Staff requests that the Applicant specify and provide a map of substation/switchyard location(s) and the location of access roads for construction and operation of these facilities.

Exhibit 4 – Land Use

Section 2.4.1– Discussion

1. Discussion of existing land uses should identify and discuss the existing underground gas transmission line owned and operated by Central

Hudson Gas and Electric Corp. that crosses through the eastern portion of the Facility Area.

2. The Application should include an analysis of reduction in agricultural lands associated with the Project in relation to the extent of Active Agricultural Land within the rest of the designated Agricultural District. It should also identify other threats of non-agricultural development within the Agricultural District and identify cumulative impacts on the Agricultural District. Consideration of impacts on local agricultural support businesses and services serving the District should also be evaluated.

Exhibit 9 – Alternatives

Section 2.9.1(b) - Recreational, Cultural and Other Concurrent Uses of the Site

1. The Application should include an analysis of reduction in agricultural lands associated with the Project in relation to the extent of Active Agricultural Land within the rest of the designated Agricultural District. It should also identify other threats of non-agricultural development within the Agricultural District and identify the cumulative impacts on the Agricultural District. Consideration of impacts on local agricultural support businesses and services serving the District should also be evaluated.

Section 2.9.1 – Alternative Layouts at the Proposed Facility Location (p. 53)

1. The Application should address alternative facility technology, scale, layout and design considerations that could enable a range of degrees of continued agricultural use of the Facility Site, including:
 - a. a taller solar panel rack system and pole-mounted arrays that would reduce the footprint while enabling greater access within the arrays for livestock grazing, hay- or row-cropping or other agricultural uses of the ground surface;
 - b. alternative configurations that minimize the impact of isolated or “orphaned” field corners and edges that become un-farmable due to size and orientation; and
 - c. identify alternative fencing designs that would support agricultural uses such as grazing while maintaining a more traditional appearance of agricultural fencing, rather than industrial-security fencing, and avoid the use of razor-wire topped perimeter fencing, particularly along public roads, areas of open views and near residences.
2. The alternatives discussion should also address consideration of adding energy storage capability as an ancillary feature of Project design.

Exhibit 11 – Preliminary Design Drawings

Section 2.11.2 – Proposed Content of the Application

1. DPS Staff recommends that the Applicant provide a completed Flint Solar LLC Project Attachment 1, Maps Sizes and Scales Sheet, in the response to PSS comments, regarding approximations of drawing scales to be used for Application content. This attachment contains a list of typical solar farm drawings and includes headings for anticipated corresponding extent limits, scales, and proposed drawing paper sizes.
2. Designs for surface-mounted conduits for the electrical collection system alternative (as described at PSS Section 2.20.2(a)(1); PSS page 97)) should be provided.
3. Transmission line is listed on page 66 as one of the items to be included in site plans. DPS Staff advises that the existing transmission line access corridor and right-of-way limits, in relation to the point of interconnection and other Project components should be shown on the site plans, in addition to any proposed transmission line(s) associated with the Project.
4. DPS Staff advises that site plans should also include outlines of any proposed laydown/marshalling yards and associated setbacks, access, and parking areas.
5. Regarding 2.11.2(f): in addition to what is listed on page 67, DPS Staff advises that architectural drawings and elevation plans should be included for a typical solar panel installation, the proposed collection substation and any proposed battery storage systems associated with the Project.

Exhibit 12 – Construction General Requirements

Section 2.12.1 – Proposed Content of the Application

1. It is noted on page 73 of the PSS that “[t]he Applicant has identified the Central Hudson Gas Transmission System and Iroquois Gas Pipeline which run through the Facility Site. Additionally, the approved Champlain (Hudson) Power Express Line is expected to be buried within CSX ROW and be in service by 2022...construction efforts may need to be coordinated.” This issue is also addressed on page 74. In reference to the above statements, DPS Staff recommends that consultation with existing utility owners should be occurring during this scoping phase of the Project. Therefore, it is recommended that consultation take place with the owners of the gas pipelines traversing the Facility site, in addition to representatives of the Champlain Hudson Power Express, to obtain

specific information regarding crossing of or installations nearby existing (or planned) utilities. Any specific criteria recommended or required by utility owners should be reported in the Application.

2. DPS recommends that this section of the Application include the following additional information from consultations with the electric and gas utility owner(s):
 - a. copies of any construction guidelines (available or provided by utility owners) for installation near existing utilities;
 - b. specific utility owner criteria for installations of Facility components near the existing electric and gas utilities;
 - c. descriptions of any potential studies (including potential cathodic protection impact studies) required or recommended by the utility owners (along with an indication of timing of the studies);
 - d. specific separation requirements or recommendations regarding specific Facility components (substation, collection lines, panels, etc.) in relation to existing electric and gas utilities;
 - e. descriptions and typical details of any required or recommended protective features to be placed at crossings of or nearby the existing utilities; and
 - f. communications and coordination requirements of the pipeline and electric facility owner-operator for construction in close proximity to the pipeline or electric right-of-way.

Exhibit 13 – Real Property

Section 2.13.2 - Proposed Content of Application

1. The depiction of the Facility Site at PSS Figure 3 indicates many parcels under consideration that are not contiguous. There is no indication of the location of electric collection lines that would connect the various component parcels to the parcel with the POI interconnection site. Exhibit 13 must address real property needs for the entire proposed Facility.

Section 2.13.2(a) – Real Property Map of Generating Site

1. The owner of record of all parcels included in the facility and for all adjacent property owners should be included in the survey.
2. Please clarify when the “land surveys will be performed.”

Exhibit 15 – Public Health and Safety

1. The Application should address design and construction measures for co-location of facilities with the existing gas transmission pipeline and railroad facilities and safety plans for safe construction activities near overhead electric transmission facilities.

Exhibit 18 – Safety and Security

Section 2.18.2 – Proposed Content of the Application

1. The Application should address design and construction measures for co-location of facilities with the existing gas transmission pipeline and railroad facilities and safety plans for safe construction activities near overhead electric transmission facilities.

Exhibit 19 – Noise and Vibration

1. The PSS should address all the requirements of 16 NYCRR §1001.19 Exhibit 19. Please see DPS Staff comments and recommendations in Appendix 2. The Applicant should revise and expand the scope of the proposed studies to address all the requirements of 16 NYCRR §1001.19 Exhibit 19. The parties will continue discussing the scope of studies during the pre-application PSS and stipulation phases.

Exhibit 21 – Geology, Seismology and Soils

Section 2.21.2(c) – Cut and Fill

1. Preliminary cut and fill estimates should include separate estimates of materials that may need to be imported for access road construction, structural base for foundations, and compacted fill for placement of buried electric lines.

Section 2.21(f) – Excavation Techniques to be Employed

1. If horizontal directional drilling (HDD) is anticipated for stream/wetland crossings, road crossings, or other locations, the Application should include maps of the Facility Area identifying proposed HDD locations and a frac-out risk assessment based on the results of the preliminary geotechnical investigations and known geologic conditions.

Section 2.21(l) – Regional Geology, Tectonic Setting, and Seismology

1. The western side of the proposed Facility is located adjacent to an area of mapped carbonate karst. The Application should include a description of regional karst conditions and discuss any evidence of fissures or other karst features observed during the preliminary geotechnical investigations.

If it is determined that the Facility will be located within areas of known or suspected karst, the Application should:

- a. identify how construction activities will minimize excavations in karst-prone areas where excavations may facilitate subsurface erosion;
- b. address risks and impacts to karst features and aquifers from directional drilling frac-outs and soil and bedrock displacement during excavations, boring operations, and pile driving; and
- c. if blasting is proposed, describe potential impacts to karst features from blasting operations.

Section 2.21.2(p) – Characteristics of Each Soil Type and Suitability for Construction

1. The PSS states that the Application will describe the suitability and limitations of existing soils, including soil corrosivity. DPS Staff advises that soils in most of the Facility Area are characterized as having a high risk of corrosion of steel. Portions of the Facility Area are also characterized as having a medium-high risk of corrosion/degradation of concrete. Separate evaluations should be provided to address the potential for corrosion of uncoated steel and for corrosion and degradation of concrete.
2. DPS Staff notes that the Facility Area is characterized as having a high risk of frost action, particularly for shallow foundations and infrastructure. The discussion of the suitability of existing soils for construction and fill should include an evaluation of the risk of structural damage or displacement to foundations and underground cables due to frost action and soil shrink/swell (if applicable based on the soils types within the project area). If existing soils are proposed for re-use as structural and/or compacted fill, the Application should assess the suitability of existing soils specifically for those purposes and describe screening measures to remove materials that do not meet the fill composition characteristics recommended by the Applicant's geotechnical expert.

Section 2.21.2(r)(2) – Pile Driving Assessment

1. If piles will be used, the Application should include a description of methods for minimizing potential post and pile driving vibrational impacts on nearby buildings, water wells, or other infrastructure. The Application should include a description and justification of any proposed pile-driving setback distances.

Exhibit 22 – Terrestrial Ecology and Wetlands

Section 2.22(a) – Proposed Content of the Application

1. There is a reference to ‘see discussion in Stipulation 11(b)(2)(iii) below regarding invasive species mapping’. The PSS does not include Stipulations or any items numbered as indicated. Please provide clarification.

Section 2.22.2, (d), (f), (g), and (o) – Proposed Content of the Application

1. The above-referenced sections, as well as the analysis of the Project’s consistency with the Greene County Grassland Habitat Management Plan (GCGHP) in Section 2.4 (Land Use), all discuss impacts to grassland habitats and the species that utilize them. The Application should provide, in one location, a synopsis that consolidates the separate discussions. The consolidated discussion should include:
 - a. based on literature review and already conducted surveys, an overview of the use of grassland habitats by listed species;
 - b. an evaluation of grassland habitat loss and preservation that would result from the Project;
 - c. an assessment of the adequacy of remaining grassland habitat to sustain use by listed species within the Project boundary;
 - d. an evaluation of cumulative impacts to grasslands and associated avian species within the GCGHP; and
 - e. proposed mitigation for impacts to listed species that are dependent on grassland habitat.

Exhibit 23 – Water Resources and Aquatic Ecology

Section 2.23.1 – Discussion, Surface Water

1. The PSS states that the Facility Area is located approximately one-mile northeast of Sleepy Hollow Lake, a source of drinking water for the surrounding community. DPS Staff notes that the proposed Facility Area is located approximately one mile west and northwest of the lake (the southern portion of the proposed Facility area is located west of the northern portion of the lake).
2. Staff further notes that the northern portion of the Facility Area is located approximately one mile southwest of the Climax Reservoir Drinking Water District, a surface water reservoir that supplies drinking water to the Village of Coxsackie. DPS Staff recommends that the Application also

include an assessment of potential impacts of Facility construction on water quality and uses of this public drinking water resource.

Section 2.23.2(a) – Groundwater

1. The locations of public and private drinking water wells should be verified through field observations where property access rights are obtained by the Applicant. The proposed maps showing groundwater information and well locations should distinguish whether each well location is approximate or confirmed. GIS data for the public and private well locations should be provided to DPS Staff.

Section 2.23.2(c) – Stormwater

1. The Application should include an evaluation of potential impacts of stormwater runoff on agricultural uses and drainage patterns within and surrounding the Facility Area. The Application should describe how stormwater controls, and drainage features during site restoration, will be designed to avoid post-construction impacts to water wells and surrounding agricultural land uses.

Exhibit 24 – Visual Impacts

Section 2.24.2(a) – Proposed Content of the Application

1. DPS Staff recommends that line-of-sight figures and/or wire-frame visual simulation be prepared for vistas from the Olana State Historic Site carriage trail viewpoints, extending north-westerly toward the Facility Site, to demonstrate limitations on visibility.
2. DPS Staff recommends that the Bureau of Land Management methodology contrast rating criteria be used, rather than modifications or simplifications of that method, for the evaluation referenced in Section 2.24.2(a)(8).

Section 2.24.2(b)(1), (2) and (4) – Proposed Content of the Application

1. The Section 2.24.2(b)(1) of the PSS indicates that an assumed maximum height of PV modules of 15 feet will be used, while Section 2.24.2(b)(2) states an assumed height of 10 feet will be used. DPS Staff recommends that an assumed height of 15 feet or more be used, in the event that alternative racking system that can accommodate continued agricultural uses of portions of the site is utilized in Final Design.

2. Section 2.24.2(b)(4) should clarify that the visual stakeholder list will include the municipalities (e.g., Columbia County, City of Hudson) that are within the five-mile Visual Study Area.

Exhibit 26 – Effect on Communications

Section 2.26.2 - Proposed Content of the Application

1. The PSS states on page 164; “1001.26(a) shall identify all existing broadcasting communication sources within a two-mile radius of the Facility and the associated interconnection between the Facility and the POI including ... microwave transmission.” It should be noted that 16 NYCRR §1001.26(a)(5) requires identification of microwave transmission at “all affected sources, not limited to a two-mile radius.”

Exhibit 27 – Socioeconomic Effects

1. The Applicant proposes to use the Job and Economic Development Impact (JEDI) model, created by the National Renewable Energy Laboratory (NREL), to estimate job impacts. DPS Staff is concerned with using the JEDI model because it has a number of limitations. For example, the JEDI model results reflect gross impacts and not net impacts, the JEDI model assumes fixed linear relationships, etc. (<https://www.nrel.gov/analysis/jedi/limitations.html>). Thus, Staff reserves the right to critique the economic model used by the Applicant and/or the input values entered into that job impact model. The Applicant should make available all job estimates and model workpapers for Staff’s review.
2. The Applicant should rely on direct job estimates for the construction and operational phases that are included in the Applicant’s budgets for this project to inform socioeconomic effect estimates for the Flint Mine Solar Project. If Flint Mine Solar, LLC, or its parent companies, Amber Infrastructure Group Limited and Hudson Energy Development, LLC, has planned or completed other solar facilities in New York State or across the country, the Applicant should also seek to rely on actual job and economic impact numbers from previous projects in informing socioeconomic effect estimates for the Flint Mine Solar Project. The Applicant should make efforts to use actual job and economic impact numbers from projects that most closely resemble the Flint Mine Solar Project in terms of location, MW capacity, acreage, and/or regional economics.
3. The analysis of secondary employment and economic activity should also consider an analysis of other impacts such as the economic impact associated with the cancellation of new power plants made unnecessary by the added solar capacity and the economic impacts associated with possible changes in the retail price of electricity to reflect solar power incentives and subsidies. DPS Staff advises that the Applicant should

refer to NYSEDA's January 2012 New York Solar Study for guidance on addressing the secondary job impacts associated with any changes in the retail price of electricity as well as the economic impacts associated with the cancellation or closure of any new or existing power plants made unnecessary by the added solar capacity of the Project (see <https://www.nyserda.ny.gov/About/Publications/Solar-Study>). Finally, DPS Staff proposes that the Applicant commit to track and report the actual number of direct jobs created during the construction and operational phases of the Project, as well as the tax payments to local jurisdictions (see Cassadaga order in Case 14-F-0490, Condition #78).

Exhibit 29 – Site Restoration and Decommissioning

Section 2.29.1 – Proposed Content of the Application

1. The description of the contents of the Decommissioning Plan does not address notification procedures prior to site decommissioning activities. In addition, the PSS indicates the Plan will provide notification to the Towns but does not mention it will include landowners. Lastly, the PSS states that Town officials will be notified in a “reasonable timeframe.” The Plan should include a more detailed explanation of the notification schedule and the notice recipients for both decommissioning and restoration activities.

Exhibit 31 – Local Laws and Ordinances

Section 2.31.2 – Proposed Content of the Application

1. Analyses of Applicable Local Ordinances and Laws must be based on laws and regulations and criteria applicable at the time the Application is submitted. DPS Staff advises that supplemental analyses may be necessary in the event that one or both of the host municipalities or Greene County adopts additional or different laws, regulations, codes, or other requirements following submittal of an Application.
2. DPS Staff requests that complete copies of all Facility Area local laws and ordinances and other applicable provisions, including attachments, tables, maps and other supporting documents, be provided as an Appendix to the Application.

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APPENDIX 1: Comments and Recommendations on PSS

**Preliminarily Proposed Map Sizes and Scales for Article 10 Application For Printed Maps
(for full-size copies of drawing sets)**

Exhibit	Title	Format	Extents	Acres of Extents	Scale (mi/in)	Scale (ft/in)	Scale (in/in)	Size	#Sheets	16 NYCRR Ref.
3	Layout	PDF	PA		0.4	2,000	24000 *	B	TBD	1001.3 (a) (1) & (4)
3	Study Area	PDF	SA		0.4	2,000	24000 *	B	TBD	1001.3 (a) (5)
3	Towns	PDF	PA		0.4	2,000	24,000	B	TBD	1001.3
3	School Districts	PDF	PA		1	5,280	63,360	B	TBD	1001.3 (b)
3	Fire Districts	PDF	PA		1	5,280	63,360	B	TBD	1001.3 (b)
3	Project Location	PDF	PA		0.4	2,000	24,000	B	TBD	1001.3 (b)
4	Land Use Map	PDF	PA		0.2	1,000	12,000	B	TBD	1001.4 (a)
4	Utility Infrastructure Map	PDF	SA		1	5,280	63,360	B	TBD	1001.4 (b)

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4	Land Ownership Map	PDF	PA	0.2	1,000	12,000	B	TBD	1001.4 (c)
4	Zoning Districts (if applicable)	PDF	SA	1	5,280	63,360	B	TBD	1001.4 (d)
4	Proposed Land Uses	PDF	PA	1	5,280	63,360	B	TBD	1001.4 (f)
4	Agricultural Districts	PDF	SA	1	5,280	63,360	B	TBD	1001.4 (g)
4	Utility Infrastructure Map	PDF	SA	1	5,280	63,360	B	TBD	1001.4(h)
4	Recreation and other uses	PDF	SA	1	5,280	63,360	B	TBD	1001.4 (h)
4	Aerial Photographs and Vegetation Clearing Map	PDF	SA	0.2	1,000	12,000	B	TBD	1001.4 (m) & (n)
9	Alternative Sites	PDF	TBD	0.4	2,000	24,000	B	TBD	1001.9 (a)
9	Alternative project layout(s)	PDF	TBD	0.02	100	1,200	D2	TBD	1001.9 (c) (4)
11	Overall Site Plan for all facilities	PDF	TBD	0.02	100	1,200	D2	TBD	1001.11 (a)
11	Site Plans	PDF	PA	0.02	100	1,200	D2	TBD	1001.11 (a)

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11	Site Plan for Project Substation	PDF	TBD	0.02	100	1,200	TBD	TBD	1001.11 (a)
11	Site Plan for O&M Building (if applicable)	PDF	TBD	0.02	100	1,200	TBD	TBD	1001.11 (a)
11	Site Plan for Laydown Yard	PDF	TBD	0.02	100	1,200	TBD	TBD	1001.11 (b)
11	Site Plan for POI Switchyard	PDF	TBD	0.02	100	1,200	TBD	TBD	1001.11 (h)
11	Transmission Line Plan and Profile, Route Plan	PDF	TBD	0.04	200	2,400	B	TBD	1001.11 (h)
13	Real Property	PDF	PA	0.2	1,000	12,000	B	TBD	1001.13 (a) & (b)
15	Public Health and Safety	PDF	SA	1	5,280	63,360	B	TBD	1001.15 (f)
18	Security Site Plan	PDF	TBD	0.02	100	1,200	TBD	TBD	1001.18 (a) (1) & (4); (b) (1) & (5)
19	Noise contour map	PDF	PA	0.2	1,000	12,000	D2	TBD	1001.19 (a)
21	Slopes	PDF	PA	1	5,280	63,360	B	TBD	1001.21 (a)
21	Soil Types	PDF	PA	0.4	2,000	24,000	B	TBD	1001.21 (o)
21	Bedrock	PDF	PA	2	10,560	126,720	B	TBD	1001.21 (q)

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22	Delineated Wetlands Map	PDF	PA	0.4	2,000	24,000	B	TBD	1001.22 (i)
23	Water Resources - Groundwater	PDF	PA	0.4	2,000	24,000	B	TBD	1001.23 (a) (2)
23	Water Resources - Surface Waters	PDF	PA	0.4	2,000	24,000	B	TBD	1001.23 (b) (1)
23	SWPPP (preliminary)	PDF	PA	0.02	100	1,200	D2	TBD	1001.23 (c) (1) & (2)
24	Viewshed map(s)	PDF	SA 10mi	0.4	2,000	24,000 *	B	TBD	1001.24 (b) (1)
25	Site plan access roads	PDF	TBD	0.02	100	1,200	D2	TBD	1001.25 (a) (2)
26	Microwave Paths - Facilities near paths shown in greater detail	PDF	PA	2.6	13,750	165,000	A	TBD	1001.26 (a) (5)
28	Potential Environmental Justice Area Map	PDF	SA	2	10,560	126,720	B	TBD	1001.28 (a)
35	EMF and residences	PDF	TBD	0.02	100	1,200	D2	TBD	1001.35 (c)

Notes: PA = Project Area, SA= Study Area, Size A = 8.5"x11", Size B = 11"x17", Size C = 18"x24", Size D2= 22"x34", Size D=24"x36"

*** Denotes scale requirements of Part 1001 *Content of an Application***

All maps will be delivered in PDF format with the Article 10 application, and shape files or CAD files can be supplied where requested.

All scales above are proposed based on preliminary analysis and may need to be adjusted based on actual data.

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APPENDIX 2: Comments and Recommendations on PSS

Text of 16 NYCRR §1001.19 Exhibit 19 is highlighted in red italic text. NYS DPS Staff recommendations are identified in black color text. Numbering of subsections may not be part of the text of the regulation.

Exhibit 19 shall contain: A study of the noise impacts of the construction and operation of the facility, related facilities and ancillary equipment. The name and qualifications to perform such analyses of the preparer of the study shall be stated. If the results of the study are certified in any manner by a member of a relevant professional society, the details of such certification shall be stated. If any noise assessment methodology standards are applied in the preparation of the study, an identification and description of such standards shall be stated.

Provide qualifications of the preparer(s) of the study and an identification and description of methodologies, standards, and guidelines as an appendix.

The study shall include:

a) A map of the study area showing

1) the location of sensitive sound receptors in relation to the facility, related facilities and ancillary equipment (including any related substations).

- i) The Application should include map(s) in digital format of the Sound Study area that should extend, at a minimum, as required by any law or regulation; 1,500 feet from the edge of the facility area; or until the 30-dBA noise contour is reached, whichever is greater.
- ii) Show all sensitive sound receptors and boundary lines (differentiating participating and non-participating parcels); noise sources within the Sound Study Area (including transformer(s), inverters, and other noise sources, if any).
- iii) Submit full-size hard copy maps (22"x34") in 1:12,000 scale to DPS Staff with the Application.

2) The sensitive sound receptors shown shall include residences, outdoor public facilities and areas, hospitals, schools and other noise-sensitive receptors.

- i) All residences should be included as sensitive sound receptors regardless of participation in the project (e.g., participating, potentially participating, and non-participating residences) or occupancy (e.g., year-round, seasonal use).
- ii) Only properties that have a signed contract with the Applicant prior to the date of filing the Application should be identified as "participating." Other properties may be designated either as "non-participating" or "potentially participating." Updates with ID-tax numbers may be filed after the Application is filed.

- iii) Other noise sensitive receptors should include libraries, parks, camps, summer camps, places of worship, cemeteries, and Federal and State Lands.
- iv) Seasonal receptors should include, at a minimum, cabins and hunting camps, identified by property tax codes, and any other seasonal residences with septic systems/running water within the Sound Study Area.
- v) The Applicant should coordinate with land owners and local authorities to identify any existing or proposed sound sensitive receptor within the Study Area.

(b) An evaluation of ambient pre-construction baseline noise conditions, including A-weighted/dBA sound levels, prominent discrete (pure) tones, at representative potentially impacted noise receptors, using actual measurement data recorded in winter and summer and during day and night as a function of time and frequency using a suitable and suitably calibrated sound level meter (SLM) and octave band frequency spectrum analyzer, or similar equipment. The ambient pre-construction baseline sound level should be filtered to exclude seasonal and intermittent noise.

Conduct sound collections by following the most relevant and applicable portions of the most recent versions of ANSI/ASA standards for measurement of sounds. For recommendations on a protocol for conducting the ambient pre-construction baseline noise conditions see “Cumulative Noise Impacts” section below.

(c) An evaluation of future noise levels during construction of the facility and related facilities including predicted A-weighted/dBA sound levels at potentially impacted and representative noise receptors, using computer noise modeling.

- i) Follow, at a minimum, the guidelines and recommendations of the FHWA Highway Construction Noise Handbook (Reference 1) that are applicable to the project. Although developed mainly for roadway projects, the handbook is applicable to many construction projects and provides guidance in measuring, predicting, and mitigating construction noise and developing noise criteria.
- ii) Consult the noise database for construction equipment listed in Reference 1 and determine whether those emissions or any other, resemble the noise emissions of the construction equipment that is proposed to be used for the Project.
- iii) Include a discussion of time frames for construction activities indicating seasons of the year, days of the week, hours of the day, and whether construction activities will be performed during evening time (6:00 p.m. to 10 p.m.), nighttime (after 10:00 p.m. or before 7:00 a.m.), during weekends (Saturdays or Sundays), or national holidays.
- iv) Use a computer noise modeling software that incorporates the ISO-9613-2 propagation standard for the main phases of construction (e.g., clearing, foundation, and installation of solar panels and transformers).
- v) Recommended Outdoor Propagation Standard: See reference 2.
- vi) Report construction sound level contours within the Sound Study area (graphical format) and sound levels at the most impacted receptors (in tabular format)

(d) An estimate of the noise level to be produced by operation of the facility, related facilities and ancillary equipment assuming

- 1) *wind-induced background noise or stable atmospheric conditions, as appropriate,*
 - i) Use the ISO-9613-2 standard along with proper assumptions for ground absorption factor (G), with no meteorological correction (Cmet).
 - ii) Discuss ground absorption values and sound power level assumptions for computer noise modeling (under ISO 9613-2 propagation standard) during the PSS and Stipulation phases and in the Application.
 - iii) Include, as part of the scope and in the Application, a discussion on the accuracy of computer noise modeling when using the ISO 9613-2 propagation standard (For a discussion about the accuracy and limitations of the ISO 9613-2 standard, consult at a minimum, section 9 of Reference 2).
 - iv) If any corrections are applied to any model results, both corrected and uncorrected results should be presented along with a discussion, documentation, and justification for any corrections.

- 2) *and not assuming any attenuation of sound that transiently occurs due to weather or temperature.*

Use a temperature of 10 Celsius degrees and 70% Relative Humidity. These assumptions generally yield the lowest sound absorption provided by the air.

(e) An evaluation of future noise levels during operation of the facility, related facilities and ancillary equipment including

- 1) *predicted A- weighted/dBA sound levels,*

Specify range of frequencies to be evaluated. Noise computer software typically includes full-octave band sound frequencies from 31.5 Hz up to 8,000 Hz.
- 2) *prominent discrete (pure) tones, and*

Estimate tonality values by using the simplified definition of prominent tones as recommended for Exh. 19(b)(4).¹
- 3) *amplitude modulated sound, at potentially impacted and representative noise receptors,*

Include this analysis only if there will be any amplitude modulated sounds.
- 4) *using computer noise modeling, and an analysis of whether the facility will produce significant levels of low frequency noise or infrasound.*

The PSS should propose a methodology for evaluation of low frequency noise, if any. (Consider using the outdoor criteria established in reference 3).

(f) A statement in tabular form of the A-weighted/dBA sound levels indicated by measurements and computer noise modeling at the representative external property boundary lines of the facility and related facilities and ancillary equipment sites, and at the representative nearest and average noise receptors, for the following scenarios:

- 1) *Daytime ambient noise level - a single value of sound level equivalent to the level of sound exceeded for 90% of the time during the daytime hours (7 am - 10 pm) of a year (L90).*

¹ Electrical tonal noise sources should be assumed audible and prominent at the closest residential receptors, unless demonstrated otherwise.

- 2) *Summer nighttime ambient noise level - a single value of sound level equivalent to the level of sound exceeded for 90% of the time during the nighttime hours (10 pm - 7 am) during the summer (L90).*
- 3) *Winter nighttime ambient noise level - a single value of sound level equivalent to the level of sound exceeded for 90% of the time during the nighttime hours (10 pm - 7 am) during the winter (L90).*
 - i) The PSS should specify how the information obtained from the baseline pre-construction ambient noise survey will be processed to evaluate the L90 statistical noise descriptors required by 16 NYCRR §1001.19(f).
 - ii) DPS Staff recommends following the provisions of reference 4 to calculate and report the L90 and Leq values.²
- 4) *Worst case future noise level during the daytime period - the daytime ambient noise level (L90), plus the noise level from the proposed new sources modeled as a single value of sound level equivalent to the level of sound exceeded for 10% of the time by such sources under normal operating conditions by such sources in a year (L10).*
- 5) *Worst case future noise level during the summer nighttime period - the summer nighttime ambient noise level (L90), plus the noise level from the proposed new sources modeled as a single value of sound level equivalent to the level of sound exceeded for 10% of the time by such sources under normal operating conditions by such sources in a year (L10).*
- 6) *Worst case future noise level during the winter nighttime period - the winter nighttime ambient noise level (L90), plus the noise level from the proposed new sources modeled as a single value of sound level equivalent to the level of sound exceeded for 10% of the time by such sources under normal operating conditions by such sources in a year (L10).*
- 7) *Daytime ambient average noise level – a single value of sound level equivalent to the energy-average ambient sound levels (Leq) during daytime hours (7 am –10 pm); and*
- 8) *Typical facility noise levels - the noise level from the proposed new sources modeled as a single value of sound level equivalent to the level of the sound exceeded 50% of the time by such sources under normal operating conditions by such sources in a year (L50).*
- 9) *Typical future noise level during the daytime period - the energy- average ambient sound level during daytime hours (Leq), plus the noise level from the proposed new sources modeled as a single value of sound level equivalent to the level of the sound exceeded 50% of the time by such sources under normal operating conditions by such sources in a year (L50).*
 - iii) Note that NYCRR §1001.19(f) requires evaluation of the L10 and L50 noise descriptors during “normal operating conditions” and for that reason DPS Staff recommends excluding the periods of time when the facility will not be operating (typically nighttime) from calculation of the future operational noise levels L10 and L50.³

² Alternatively, the L90 noise descriptor for the daytime, nighttime, summer, winter, and for a year (see 16 NYCRR §1001.19(f) for details) can be determined by reprocessing short time collections of the Leq noise descriptor (e.g., 1 sec.) after exclusions are applied. Although it may be conservative, the L90 can also be estimated by calculating the percentile 10 of all short-time L90 samples (e.g., Percentile 10 of all L90-10 minute samples)

³ If the Applicants believe that the inclusion of periods of time when the facility will not be operating is necessary for determination of any other descriptor needed either for the analysis of a specific topic, methodology, guideline or regulation, the issue should be discussed during the PSS and Stipulation phases.

- iv) Typically, if the noise sources operate at maximum noise conditions for 10% of the time or more, the L10 may be approximately equivalent to the maximum sound pressure levels calculated with the maximum sound power levels from the noise sources.
- v) L50: Two simple approaches are proposed.^{4, 5}

(g) A description of the noise standards applicable to the facility, including

1) any local requirements,

Provide full copies of local laws on noise during the PSS or stipulation phases and in the Application, if any.

2) and noise design goals for the facility at representative potentially impacted noise receptors, including residences, outdoor public facilities and areas, hospitals, schools, other noise- sensitive receptors, and at representative external property boundary lines of the facility and related facilities and ancillary equipment sites.

- i) DPS recommends consideration of the following guidelines and standards: See references 5⁶, 6⁷, 7⁸ and 3^{9, 10}.
- ii) New York State Public Service Commission (NYS PSC) standards for transmission facilities and substation generally require designs to minimize environmental impacts and not to exceed a maximum noise level of 40 dBA Leq without prominent tones, or 35-dBA if a prominent tone occurs or is likely to occur (for both daytime and nighttime).¹¹
- iii) For a discussion of complaint potential criteria see section (k)(3) below.

(h) A tabular comparison of

1) the noise standards applicable to the facility,

⁴ The L50 can be conservatively assumed to be equal to the L10.

⁵ If sound power levels at different percentages of power load are known for the transformers, a percentile 50 of the power generation can be estimated and expressed as a percentage of the maximum power generation (e.g., 50%). The difference in sound power levels from the noise sources at the maximum power (e.g., 100%) and the L50 power generation (e.g., 50%) can be found and expressed in decibels. The L50's at all evaluated receptors can be estimated by subtracting the same number of decibels from the maximum sound pressure levels.

⁶ The recommendation is not to exceed a 40 dBA-Leq-1-year nighttime outdoor sound level. Solar collection facilities may typically comply with this recommendation.

⁷ The recommendations are: 45 dBA Leq 8-hour-nighttime maximum outdoor sound level in a year (Solar collection facilities may typically comply with this recommendation) and 35 dBA Leq-16-hour indoor daytime sound level.

⁸ The standard calls for an adjustment factor for tonality equivalent to 5 dB.

⁹ The standard states that annoyance to low frequency sounds is minimal when sound levels at the 16, 31.5 and 63 Hz. full-octave bands are lower than 65 dB (linear-unweighted).

¹⁰ Please note that under previous Article X regulations, generating facilities were designed to minimize environmental noise impacts and not to exceed an mCNR (Modified Composite Noise Rating) level of "C" that corresponds to a level of reaction between "No Reaction" and "Sporadic Complaints". This resulted in Power Generating Facilities designed for maximum noise levels of 42-dBA (daytime and nighttime) or lower at suburban and rural-residential areas. See section (k)(3) and reference 10 for details.

¹¹ More recently electrical substations and transformers have been approved by the NYS-PSC with modeled sound levels of 35-dBA or lower at all residential receptors (See Case # 10-T-0080. Application of Niagara Mohawk Power Corporation d/b/a National Grid for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII for the Construction of a New 115 kV Electric Transmission Line from Spier Falls, Saratoga County to Rotterdam, Schenectady County - Lasher Road Substation Amendment).

Evaluation of conformance with identified noise standards, goals, thresholds and local requirements at all sensitive receptors and boundary lines should be included in the scope. Results should be presented in tabular format (for sensitive sound receptors) and in graphical format (Sound contours for property lines).

2) including any local requirements,

The PSS should specify how the degree of compliance with local laws on noise, if any, will be evaluated including noise descriptors (e.g., L10, Leq), time frame of evaluation (e.g., 10-minutes, 1-hour). This should include a discussion of the parameters, assumptions or corrections that should be used for sound level predictions. DPS Staff notes that the assumptions or corrections for computer noise modeling for evaluation of local laws may be different than for other relevant criteria.

3) and noise design goals for the facility,

Report estimates of the number of residences (or population) that will be exposed to noise levels that exceed any identified limit, threshold, goal, guideline or recommendation in the Application. (In terms of absolute and percent values).

4) and the degree of compliance indicated by computer noise modeling at the representative external property boundary lines of the facility and related facilities and ancillary equipment sites, and at the representative nearest and average noise receptors.

- i) Participant and non-participant boundary lines should be indicated and differentiated in the map and sound contour drawings. Degree of compliance with noise design goals at the boundary lines of the facility should be stated in the Application.
- ii) Sensitive sound receptors should be identified with land/tax ID numbers in tables and on sound contour drawings.

(i) An identification and evaluation of

1) reasonable noise abatement measures for construction activities,

The scope and Application should list general examples of noise mitigation measures that may be applied to address reasonable complaints from construction noise.

2) including a description of a complaint- handling procedure that shall be provided during the construction period.

Include a Protocol to address potential complaints for construction in the Application.

(j) An identification and evaluation of

1) reasonable noise abatement measures for the final design and operation of the facility

The scope and Application should list general examples of reasonable noise abatement measures available for the final design and operation of the facility.

2) including the use of alternative technologies, alternative designs, and alternative facility arrangements.

Results of this identification and evaluation should be included in this exhibit or in 16 NYCRR §1001.9 Exhibit 9: Alternatives.

(k) An evaluation of the following potential community noise impacts:

- 1) hearing damage (as addressed by applicable Occupational Safety and Health Administration standards);*

Use OSHA 29 CFR 1910.95 and WHO-1999 (Reference 6) for sensitive sound receptors.¹²

- 2) indoor and outdoor speech interference; interference in the use of outdoor public facilities and areas;*

Follow the criteria included in WHO 1999 guidelines (Reference 6) as well as the USEPA-1974 document (References 8 and 9).

- 3) community complaint potential;*

Community complaint potential should be evaluated by using the MCNR methodology as detailed in reference 10. Consider the discussion included in Reference 11, as well.

- 4) the potential for structural damage;*

Include evaluation of the potential for some construction activities (such as blasting, excavation, horizontal directional drilling (HDD) or rock hammering, if any) to produce any cracks, settlements or structural damage on any existing proximal buildings or infrastructure, as well as any residences and historical buildings. DPS Staff also recommends using the FHWA Highway Construction Noise Handbook (Reference 1) for the discussion of noise and vibration impacts from blasting, if any.

- 5) and the potential for interference with technological, industrial or medical activities that are sensitive to vibration or infrasound.*

Address the potential to create perceptible vibrations or infrasound due to construction and operation of the facilities that may affect technological, industrial or medical activities.

(l) A description of post-construction noise evaluation studies that shall be performed to establish conformance with operational noise design goals.

DPS recommends following the recommendations indicated for Exhibit 19 (b); and Reference 12.

(m) An identification of practicable post-construction operational controls and other mitigation measures that will be available to address reasonable complaints, including a description of a complaint-handling procedure that shall be provided during periods of operation. (The text is self-explanatory)

(n) The computer noise modeling values used for the major noise-producing components of the facility shall

- 1) fairly match the unique operational noise characteristics of the particular equipment models and configurations proposed for the facility.*

Sound power level information from the relevant equipment manufacturers should be included in the Application. If sound power level information is not available from the manufacturers, it can be estimated using acoustical formulae. The methodologies for estimation and results should be described in the Application. If sound power level information is based on actual sound readings from a similar piece of equipment, the

¹² WHO-1999 recommends a limit of 70 dBA Leq-24-hour for long-term operational sound levels; and 120 and 140 dB peak sound levels for impulsive sounds (e.g. blasting) for children and adults respectively.

procedure for determination should be described along with a discussion of similarities and differences regarding the proposed equipment and whether any corrections to the input data or output results were applied and if so, provide justification.

2) The software input parameters, assumptions, and associated data used for the computer modeling shall be provided.

- i) The Application should provide input data such as: sound power levels from the noise sources; source location coordinates, ground elevations, and heights; receptor location coordinates, ground elevations, and heights; Ground absorption factors (G); Temperature and relative humidity; and other data as included in the computer model.
- ii) Scope should specify that GIS files used for computer noise modeling including noise source and receptor locations, topography, and boundary lines should be forwarded to DPS Staff in digital media, if requested.

16 NYCRR §1001.19 Exhibit 19(b)

Recommendations for evaluation of ambient pre-construction baseline noise conditions

- 1) The sound survey should follow a protocol that includes the following recommendations:
 - i) Sound instrumentation: Use type 1 or type 2 sound level meters (SLM's) and type 1 acoustical calibrators (sensitivity checkers).
 - ii) Sound floor should be equal to or lower than: 10-dB at 1/3 octave-bands, 12-dB at full-octave bands, and 20-dBA for broadband sounds.¹³
 - iii) Wind screens: Use 7"-diameter-foam or equivalent.
 - iv) Temperature of operation for SLM's: From 20 to 110 Fahrenheit degrees, at a minimum.¹⁴
 - v) Relative humidity ranges for SLM's: from 20 to 90%, approximately.¹⁵
 - vi) Calibration recommendations: Acoustical calibrator/sensitivity checker: 1-year; SLM's: 2-years, maximum.
 - vii) Meter settings: Use "fast" response or as specified in local laws, if any.
 - viii) Positions to be evaluated: Select the most representative potentially impacted receptors.
 - ix) Noise descriptors to be collected: At a minimum collect L90, L50, and Leq. Lmin and Lmax may help identifying exclusions.
 - x) Range of sound frequencies to be measured: 20 to 10,000 Hz. for 1/3 octave bands; 31.5 to 8,000 Hz. for full-octave bands.
 - xi) Weather conditions to be tested: Test from low (2 miles per hour or lower) to average wind conditions.
 - xii) Testing conditions to be excluded: periods of rain, thunderstorms, wet-road conditions, snow-fall, wind speed exceeding 5 meters per second (11 miles per hour) at the sound microphone.
 - xiii) Proposed schedules and time frames: test during winter and summer, alternatively during the leaf-on and leaf-off seasons. Collect, at a minimum, 48 hours of valid data on each season (after exclusions).
 - xiv) Testing methodologies, standards, and procedures: See References 13, 14, and 15.
 - xv) Sounds with strong low frequency noise content: identify, if any.
 - xvi) Provisions for analysis of results, reporting, and documentation: A report of ambient pre-construction baseline noise conditions can be included as an Appendix to the Application including sound instrumentation specifications, certificates of calibration, summary of weather conditions during the survey, tested locations and results.
- 2) A weighted sound levels: Include, at a minimum, 1/3 sound frequencies from 20 Hz. up to 10,000 Hz. and full-octave band frequencies from 31.5 Hz. up to 8,000 Hz.
- 3) Prominent tones: DPS Staff recommends using the simplified definition for identification of existing prominent tones, if any, as follows: A prominent discrete tone is identified as present if it is audible and the time-average sound pressure level (Leq) in the one-third-octave band of interest exceeds the arithmetic average of the time-average sound pressure level (Leq) for the

¹³ Sound levels in rural areas in New York State can be very low (e.g., as low as 20-dBA, approximately).

¹⁴ Air temperatures in New York State can be very low in winter (Below zero Fahrenheit degrees).

¹⁵ Relative humidity in New York State fluctuates from very low values (e.g., 20% or lower) up to high humidity air (e.g., 95% or more).

two adjacent one-third-octave bands by any of the following constant level differences: 15 dB in low-frequency one-third-octave bands (from 25 up to 125 Hz); 8 dB in middle-frequency one-third-octave bands (from 160 up to 400 Hz); or, 5 dB in high-frequency one-third-octave bands (from 500 up to 10,000 Hz). See References 15 and 16.

- 4) Representative potentially impacted noise receptors.
 - i) Include the most critical and representative locations considering proximity to the new proposed noise sources and existing soundscapes.
 - ii) Residential measurement locations are preferred rather than other locations that could be affected by sound from farming, dairy, construction, industrial, commercial, or human activities.
 - iii) Sound collections within wooded areas are not recommended, given the potential for contamination with leaf sounds and rustles.
 - iv) Open areas, far from wind flow obstacles, are preferred for wind speed monitoring locations.
 - v) Sound measurement positions should be selected to:
 - (1) Minimize the influence of traffic noise from local roads: Measurement positions should be no closer than 15 meters (50 feet) from the center of any roadway;
 - (2) Avoid or minimize the influence of any mechanical or electrical noise sources such as air conditioners, air condensers, heaters, boilers, fans, pumps, transformers, lighting, etc.;
 - (3) Avoid or minimize the influence of sounds from flowing or moving water;
 - (4) Minimize the influence of reflections of any buildings and other small reflective surfaces as follows: Sound microphones shall not be located closer than 7.5 mts. (25 ft.) from any reflective surface; Sound microphones shall not be located closer than 1.5 mts. (5 ft.) from any reflecting object with small dimensions such as small trees, posts, bushes, etc.
 - (5) The sound level microphone height should be 1.5 ± 0.10 meters above ground elevation (5 feet $\pm$ 4 inches).
 - (6) Report GPS or GIS coordinates of selected measurement locations, satellite pictures, and photos for all tested locations; include justifications for location selection and specify whether selected locations are representative of potentially impacted receptors, in the Application.
- 5) Collection of measurement data recorded in winter and summer and during day and night as a function of time and frequency.
 - ii) Collect pre-construction ambient noise levels at 1/3 octave bands from 20 to 10,000 Hz.
 - iii) Broad-Band A-weighted sound levels should be reported in graphs plotted as a function of time at each evaluated position showing exclusions (due to wind speed, temperature, relative humidity, rain fall or thunderstorms/snow storms).
 - iv) Plot sound levels as a function of 1/3 octave and 1/1 band frequencies for the L90 noise descriptor (for winter, summer, daytime and nighttime), including minimum, maximum and average levels for each evaluated location.
- 6) Suitable and suitably calibrated sound level meters (SLM's) and octave band frequency spectrum analyzer. Sound instrumentation for ambient sound surveys should at a minimum, comply with the standards at references 17, 18, and 19.
- 7) Filtering the ambient pre-construction baseline sound level to exclude seasonal and intermittent noise.

- i) Use of the A-Weighted noise compensated (ANS-weighted network) as recommended in reference 4 regardless of the season (for both winter and summer). Report ANS results only.
- ii) Use portable weather station(s) at sound measurement locations to continuously document, at a minimum: temperature; relative humidity; wind direction; and rain fall (precipitation). Weather information can be supplemented with information from the closest/most representative nearby airport or Mesonet station, unless the weather conditions differ substantially from those found at the site at the time of the sound surveys.
- iii) Sound data collected should be excluded if collected:
 - (1) At temperature and relative humidity out of the range of operation of sound instrumentation;
 - (2) at wind speed exceeding 5 m/sec. (11 m.p.h.) at the sound microphones (or at 2+/- 0.20 meters above the ground); or
 - (3) under rain, thunderstorms, wet-road, and snow-fall conditions.

REFERENCES

- (1) FHWA Highway Construction Noise Handbook (FHWA-HEP-06-015)
- (2) ANSI/ASA S12.92-2012/ISO 9613-2:1996 (MOD) or ISO 9613-2.
- (3) Annex D of ANSI Standard S12.9-2005/Part 4 for minimization of annoyance and prevention of vibrations, rumbles and rattles.
- (4) ANSI/ASA S3/SC1.100-2014/ANSI/ASA S12.100-2014 (Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas);
- (5) Night Noise Guidelines for Europe, World Health Organization Regional Office for Europe, Denmark, 2009. (WHO-2009)
- (6) Guidelines for Community Noise, World Health Organization, Geneva, 1999 (WHO-1999).
- (7) Table 2 of ANSI S12.9-2005/ Part 4.
- (8) Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. U.S. Environmental Protection Agency. March 1974.
- (9) Protective Noise Levels. Condensed Version of EPA Levels Document. November 1978. EPA 550/9-79-100
- (10) MCNR Method. Electric Power Plant Environmental Noise Guide. Edison Electric Institute. Bolt Beranek and Newman Inc. Report 3636. Second Edition. 1983
- (11) Recommended Noise Criteria for Siting Industrial Facilities Near Residential Communities with Extremely Low Ambient Sound Levels. David Hessler. NOISE-CON 2005. Minneapolis, Minnesota. October 17-19, 2005.
- (12) Procedures for Outdoor Measurement of Sound Pressure Level. ANSI S12.18-1994 (Reaffirmed June 15, 2009)
- (13) ANSI S.12.9-1992 Part 2 (R2013) (Quantities and Procedures for Description of Environmental Sound. Part 2. Measurement of Long-term, wide area sound);
- (14) ANSI S1.13 2005 (R March 5, 2010) (Measurement of Sound Pressure Levels in Air.
- (15) ANSI Standard S12.9- 2005/Part 4 Annex C Sounds with Tonal Content.
- (16) Percentiles of Normal Hearing-Threshold Distribution Under Free-Field Listening Conditions in Numerical Form. Kenji Kurakata, Tazu Mizunami, and Kuzama Matsushita. Acoust. Sci. & Tech. 26, 5 (2005). For hearing threshold use P5 (for a 95% confidence level) Table 2, third column.
- (17) ANSI S1.43-1997 (R March 16, 2007). Specifications for Integrating- Averaging Sound Level Meters;
- (18) ANSI S1.11-2004 (R June 15, 2009) Specification for Octave-Band Analog and Digital Filters, and
- (19) ANSI S1.40-2006 (R October 27, 2011) (Revision of ANSI 1.40-1984) Specifications and Verification Procedures for Sound Calibrators.

From: [Davis, Andrew \(DPS\)](#)
To: [Matthew Robinson](#)
Cc: [Sammons, Marcy \(DPS\)](#)
Subject: Case 18-F-0087 - Flint Mine Solar Facility Identification of Visually Sensitive Resources
Date: Friday, May 10, 2019 5:02:24 PM

[EXTERNAL SENDER]

Matthew Robinson –

NYS Dept. of Public Service Staff provides the following comments regarding the preliminary identification of visual resources in the Flint Mine Solar Study Area.

DPS requests that future correspondence with Stakeholders on this matter include the project Case Number 18-F-0087.

You may contact Marcy Sammons or me to discuss any questions with the following information.

ACDavis
NYS DPS
518-486-2853

Review of predicted areas of visibility in the Preliminary Viewshed Analysis provided with your April 8, 2019 correspondence, there appear to be at least some limited areas of visibility in several of the NYS DOS-designated Scenic Areas of Statewide Significance SASS). DPS recommends review of those areas, and in particular the SASS Sub-units where visibility, even if limited, should be assessed. These include the following:

NYSDOS – Scenic Areas of Statewide Significance

Columbia – Green North

CGN-28 Stottville Farms Subunit

This area has potential facility visibility in the Stockport Flats and Middle Ground Flats areas as well as the area near Lorenz Park and The Hudson Junior/Senior High School.

“Views from the subunit are extensive due to the large, sweeping, uninterrupted farm fields. The breadth of views extends greater than 180 degrees. The Hudson River is prominent in the middle ground, while the Catskill Mountains provide a dramatic backdrop to the west and southwest. Within the subunit, the highly varied, broad views are framed by woodlands. Farmhouses, barns and individual significant trees provide focal points.”

*(page 72 – NYSDOS Hudson River SASS)

<https://www.dos.ny.gov/opd/programs/HudsonSASS/Hudson%20River%20Valley%20SASS.pdf>

The Greenport Conservation Area maps out its trails, informational kiosks and points of interest that should be noted as scenic viewpoint opportunities. The NYS Department of Public Service recommends a greater visual study from this area as exposure time is heightened from the pedestrian viewpoint of those visiting the park.

https://clctrust.org/wp-content/uploads/2018/12/greenport_brochure.pdf

CGN-29 Stockport Creek Subunit

“The subunit has wide, full views of the Hudson, up to 180 degrees in breadth. They are of moderate length, extending one to three miles up and downstream. The variety and dynamic balance of the landscape's visual elements, together with the background provided by the unspoiled west shore of the Hudson and the distant looming Catskills to the southwest, yield many unique and outstanding compositions. Several small wooded islands and navigational lights on the river provide focal points within the viewshed.

Along the Stockport Creek the views are of a meandering water body with tumbling waterfalls and sheer cliffs. The perspective is narrow and intimate, except at the mouth of the creek where the water surface 75 broadens and encircles islands and the footings of the railroad bridge. Rowboats tied along the shore are the only reminders of man's presence in the surrounding area.”

*(page 74 – NYSDOS Hudson River SASS)

Harrier Hill Park has scenic trails, picnicking and nature watching. “A short, universally accessible trail leads from the parking area past a farm pond to the pavilion. The 2-mile Stockport-Greenport Trail, which traverses a dramatic ravine, connects with additional hiking opportunities in the Greenport Conservation Area.” <https://www.scenichudson.org/parks/harrierhillpark>

The NYS Department of Public Service recommends an in-depth look at the trails and views from Harrier Hill Park since it falls within a subunit of the NYSDOS Scenic Areas of Statewide Significance where there may be potential views of the facility.

-

Catskill – Olana

CO-6 Olana Subunit

“The meadows extending down the steep hill from the mansion were designed by Church to frame the dramatic views of the Hudson River and Catskill Mountains to the southwest and west. The views extend 102 over five miles down the Hudson and over twenty miles to the Catskill Mountains. Although distant, the Hudson River plays a major role in the setting, its broad expanse and undulating shoreline adding variety and ephemeral qualities of ever changing reflected color and light. Originally, views were also available to the west, north and northwest, and future restoration of the designed landscape may once again open these views.

The dense woodlands now surrounding the mansion to the east, north and west shelter the estate grounds from views of recent development surrounding the subunit. Carriage roads and trails provide intimate views of the landscape and constantly changing compositions featuring the mansion, the pond and landscape outside the property. Views of orchards and farm fields to the west are framed by the woodlands. The mansion is oriented to take advantage of the views, and their compositions are artfully framed by ogee curves, stained glass and decorative borders of windows and doorways of the mansion.”

*(pages 100-101– NYSDOS Hudson River SASS)

The Olana Trail Map marks areas with scenic views particularly along the Carriage Road trail which is for *"Foot Traffic Only."* The NYS Department of Public Service recommends visiting this site and the scenic views listed from the following map for further visual study due to the historic qualities and significance of this site.

<https://www.olana.org/park-map/>

Other locations in the Visual Study Area include the following:

Scenic Resources

Shakespeare on the Hudson

216 Route 385, Catskill, NY

<http://www.shakespeare-on-the-hudson.com/>

Mount Merino Manor

4317 NY 23, Hudson, NY 12534

<http://www.mountmerinomanor.com/>

Home Sweet Home on the Hudson (Senior Community / Adult Care Facility)

38 Prospect Avenue, Catskill, NY 12414

<http://www.homesweethomeonthehudson.com/>

Catwalk Art Residency

<http://catwalkartresidency.com/>

Basilica Hudson

110 South Front Street, Hudson, NY 12534

<https://basilicahudson.org/>

Hudson Hall

327 Warren Street., Hudson, NY 12534

<https://hudsonhall.org/>

Fireman's Firefighting Museum

117 Harry Howard Avenue, Hudson, NY 12534

<https://www.fasnyfiremuseum.com/>

Parks

Charles Williams Park

238 Mill Street, Hudson NY 12534

Village Green – CA Little League

73 N Franklin Street, Athens, NY 12015

Conservation Areas

Greenport Conservation Area

<https://clctrust.org/public-conservation-areas/greenport/>

Vosburgh Swamp Wildlife Management Area

<https://www.dec.ny.gov/outdoor/103701.html>

Cohotate Preserve

700 Rte 23B, Leeds, NY 12451

<https://www.greatnortherncatskills.com/outdoors/cohotate-preserve>

4 Mile Point Rd., Coxsackie, NY 12051

<https://www.scenichudson.org/>

Willows at Brandow Point

<https://www.greenelandtrust.org/>

South Bay Creek Watershed

Greenport, Columbia County

<https://www.scenichudson.org/news/article/south-bay-creek-watershed%E2%80%94greenport-columbia-county/2015-08-31>

Octaparagon Wildlife Refuge

85 Potic Creek Rd., Earlton, NY 12058

Water Locations

Stuyvesant Boat Launch

81 Riverview St., Stuyvesant, NY 12173

Coxsackie Yacht Club

Noble Street Extension, Coxsackie, NY 12051

Cemeteries

Riverside Cemetery

288 Riverside Ave, Coxsackie, NY 12051

<https://www.findagrave.com/cemetery/65828/riverside-cemetery>

Catskill Rural Cemetery (Jefferson Rural Cemetery)

27 North Jefferson Ave., Catskill NY 12414

<https://www.findagrave.com/cemetery/64964/town-of-catskill-cemetery>

St. Patrick's Cemetery

3-36N Jefferson Ave., Catskill

Athens Cemetery

16N Church Street, Athens, NY 12015

<https://www.findagrave.com/cemetery/1967873/athens-rural-cemetery/photo>

Mount Hope Cemetery

Market St. & N Church St., Athens, NY 12015

<https://www.findagrave.com/cemetery/151707/mount-hope-cemetery>

November 30, 2018

Via Electronic Filing

Hon. Kathleen H. Burgess, Secretary
New York State Board on Electric Generation Siting and the Environment
3 Empire State Plaza
Albany, New York 12223-1350

RE: Case No. 18-F-0087 Application of Flint Mine Solar LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for Construction of a Solar Electric Generating Facility Located in the Towns of Coxsackie and Athens, Greene County.

Dear Secretary Burgess:

Pursuant to the Notice of Filing of a Preliminary Scoping Statement and Deadline for Submitting Comments issued November 9, 2018, Scenic Hudson, Inc. ("Scenic Hudson") respectfully submits the following comments on the Preliminary Scoping Statement ("PSS") in the above-referenced proceeding.

I. SCENIC HUDSON'S INTEREST

Scenic Hudson is a 501(c)(3) organization based in Poughkeepsie, NY. Scenic Hudson preserves land and farms and creates parks that connect people to the Hudson River, while fighting threats to the river and natural resources that are the foundation of the Hudson Valley's prosperity. We are following this proceeding as well as several others pending before the New York State Board on Electric Generation Siting and the Environment ("Siting Board") for new, large-scale solar energy facilities proposed in the Hudson Valley (specifically, Case Numbers 17-F-0617 (Albany County Solar Facility) and 17-F-0619 (Greene County Solar Facility)).

Scenic Hudson is dedicated to preserving the scenic, ecological, recreational, historic and agricultural treasures of the Hudson River valley. We combine land acquisition, support for agriculture, citizen-based advocacy and sophisticated planning tools to create environmentally healthy communities, champion smart economic growth, open up riverfronts to the public and preserve the valley's inspiring beauty and natural resources. A crusader for the valley since 1963,

today we are the largest environmental group focused on the Hudson River and its valley. We have over 25,000 supporters, the majority of which reside in the Hudson Valley region, including in Greene County.

The Scenic Hudson Land Trust, Inc. (SHLT) is an affiliate of Scenic Hudson, Inc. that owns lands throughout the Hudson Valley in fee and by conservation easement that exhibit the open space and agricultural values that Scenic Hudson is dedicated to preserving. Scenic Hudson has protected over 40,000 acres in nine counties and created or enhanced many parks and preserves for public enjoyment, including in Greene County.

New York State policy mandating an increase in the amount of renewable energy supply from 25% to 50% of the state's total by the year 2030 is driving proposals for new, large-scale solar facilities in the Hudson Valley. New York has adopted important policies to transition the state to a 50% renewable energy supply, reduce fossil fuel emissions and mitigate climate change. Scenic Hudson strongly supports these initiatives. We seek to ensure that the development of solar energy projects in the Hudson Valley is maximized, while protecting the region's priceless natural resources, scenic views and historic sites. It is Scenic Hudson's view that we can fight climate change by helping make the Hudson Valley a leader in clean energy. This can create new jobs, provide reliable and affordable energy, and shape healthier, stronger communities.

Scenic Hudson is focused on promoting the development of solar projects in the Hudson Valley, while simultaneously preserving important natural and economic resources. We have published a guide to siting renewable projects in the Hudson Valley, *Clean Energy, Green Communities*, which was developed to help overcome challenges presented by large-scale solar projects such as this, available on-line at: www.scenichudson.org/renewables.

Clean Energy, Green Communities contains several siting and design principles for renewable energy development to help stakeholders find common ground in a regional model for increased renewable energy development that also protects natural and economic resources:

- prioritize development on previously disturbed areas;
- protect agricultural lands and promote co-location;
- protect natural beauty;
- protect ecological resources;
- protect historic and cultural resources;

- maintain the purpose of conserved lands;
- avoid and minimize new transmission and distribution lines;
- use construction and operation best practices; and
- promote sustainable renewable energy development through planning and zoning.

Under these principles, areas with high conservation, agricultural, ecological and cultural value should be avoided for development. Instead, low-conflict sites and areas should be identified and prioritized for use. Projects can be sited and designed to minimize impacts to areas of natural beauty by avoiding designated scenic areas, keeping below tree lines and including robust vegetative screening. Opportunities should be pursued to achieve dual-use, or co-location, of solar energy projects and other uses, such as pollinator-friendly plantings, livestock grazing or crops. In this way, the benefits of renewable energy can be achieved without compromising conservation values.

In Greene County, where the Facility is proposed to be located, Scenic Hudson has played a vital role in securing New York Department of Environmental Conservation Wildlife Management Areas (Vosburgh Swamp MUA in Coxsackie and Athens and The Great Vly MUA in Catskill) along with the Brandow Point Multiple Use Area. Scenic Hudson has also established multiple parks and preserves in Greene County, which provide public access to the significant and important natural resources these areas provide. These places include the Ramshorn-Livingston Sanctuary in Catskill, Long View Park in New Baltimore, and Four Mile Point Preserve, which is located in Coxsackie. Most recently, together with the Greene Land Trust, Scenic Hudson opened Mawignack Preserve in the Town of Catskill, a 144-acre property at the confluence of the Catskill and Kaaterskill Creeks, which will provide recreational opportunities and help with flood control. All told, Scenic Hudson holds, in fee or conservation easement, just over 290 acres of land in Coxsackie, and almost 1,700 acres in Greene County. Therefore, Scenic Hudson itself will potentially be affected by the proposed solar electric generation facility, as will its conservation mission in the Hudson Valley.

II. ARTICLE 10 AND THE PRELIMINARY SCOPING STATEMENT

The Preliminary Scoping Statement (PSS) stage is vitally important to the Public Service Law (PSL) Article 10 review process because it is the public's first significant opportunity to learn about and respond on the record to the potential benefits and impacts of a proposed project, the proposed studies that will be conducted in order to evaluate those potential impacts, measures

proposed to minimize environmental impacts or mitigate unavoidable impacts; and the reasonable alternatives to a project.¹

The PSS must include “as much information as is reasonably available concerning the proposed facility, generally in the form (though in less detail) than it will appear in the application” and must address, among other things, “the extent and quality of information needed for the application to adequately address and evaluate each potentially significant adverse environmental and health impact...”² The PSS serves as the scope for the application itself as well as the basis for any stipulations, or agreements, between the applicant and stakeholders on the scope and methodology of the studies to be conducted for the formal application.

Based upon the information in these studies, the Siting Board, through the PSL Article 10 process, is empowered to grant permission for an applicant to construct and operate a major electric generation facility only if it finds, among other things, that:

- it will be a beneficial addition for the electric generation capacity of the state;
- it will serve the public interest;
- “the adverse environmental effects of the construction and operation of the facility will be minimized or avoided to the maximum extent practicable;”
- if there are “significant and adverse disproportionate environmental impacts” from a proposal, that “the applicant will avoid, offset, or minimize the impacts caused by the facility upon the local community for the duration that the certificate is issued to the maximum extent practicable using verifiable measures”; and
- the Facility is designed to operate in compliance with applicable local laws concerning the environment and public health and safety that are not unduly burdensome.³

In making these findings, the Siting Board “shall consider” the state of available technology; alternatives; environmental impacts; impacts of related facilities; consistency with the state energy plan; impacts on community character; and “such additional social, economic, visual, or other aesthetic, environmental and other considerations deemed pertinent”.⁴

¹ NY Public Service Law (“PSL”) § 163(1).

² 16 NYCRR § 1000.5(l).

³ NY Public Service Law (“PSL”) § 163(3).

⁴ PSL § 168(4).

III. THE PROPOSED FLINT MINE SOLAR FACILITY

Flint Mine Solar is a proposed photovoltaic (PV) solar energy generating facility, to be located in the Towns of Coxsackie and Athens in Greene County, which would generate up to 100 megawatts (MW) of electricity (the Facility).⁵ According to the Flint Mine PSS, the lands under evaluation to host the Facility (the “Facility Site”) are comprised of 1,700 acres of “mostly abandoned agricultural fields, shrubland, and forestland, which would ultimately be purchased (or leased) by the Applicant prior to constructing the facility.”⁶ Up to 600 acres of this Facility Site will be developed with photovoltaic (PV) modules and other project components, while 1,100 acres would remain undeveloped, “including undisturbed forestland, wetlands, cultural resource areas, and open space/grassland habitat (which would be preserved as grassland habitat for sensitive wildlife and flora species).”⁷

The components of the Facility will include multiple arrays of PV modules on either fixed-tilt or single-axis tracking structures, inverters, transformers, conductors and junction boxes, a substation, a switchyard, connection lines and internal infrastructure such as access driveways, stormwater management controls, fencing and signs.⁸ The PSS also indicates that the Facility components may include batteries for storage capability within the project.⁹

The proposed Facility site is located on a flat land terrace in eastern Greene County approximately 2 miles to the west of the Hudson River. U.S. Route 9W, County Route 49, Fountain Flats Road, Flats Road, and Flint Mine Road all pass through the Facility Site and multiple residences and current and abandoned farmsteads occur along these routes. In addition, two large utility line Rights-of-Way transect the Facility Site from North to south. A portion of a CSX rail transportation corridor also passes through the eastern portion of the Facility site.¹⁰

IV. COMMENTS ON THE PRELIMINARY SCOPING STATEMENT FOR THE FLINT MINE SOLAR FACILITY

The Flint Mine PSS is organized in accordance with the exhibit structure set forth in the Siting Board’s regulations at 6 NYCRR Part 1001, which dictates the content of an application

⁵ PSS p. 3.

⁶ PSS p. 3.

⁷ PSS p. 3.

⁸ PSS p. 4.

⁹ PSS p. 4.

¹⁰ PSS p. 27.

for a certificate of under Article 10 of the Public Service Law. Rather than follow this outline, these comments are organized according to topic areas of particular concern to Scenic Hudson.

A. The Article 10 Process

The PSS states that “Flint Mine Solar will post notices if and when it intends to proceed to a Stipulations phase for this project.”¹¹

Comment:

- Scenic Hudson encourages the Applicant to engage in a negotiation of stipulations with the parties to the proceeding.

B. Potential Energy, Economic and Environmental Benefits

The PSS states that the Facility will improve energy diversity within the State by increasing the amount of electricity produced by non-fuel dependent solar power, and it will contribute significantly to the State’s clean energy and greenhouse gas emissions reduction goals and that as one of the State’s first utility-scale solar facilities, it will pave the way for future projects of its size.¹²

The PSS also states that the Facility will have positive socioeconomic impacts, including temporary construction employment and on-going employment and contracting service opportunities, as well as “increased revenues to county and local municipality tax bases, purchase of local supplies and goods, and lease revenues to participating landowners.”¹³ According to the PSS, “the Applicant proposes to negotiate a Payment in Lieu of Taxes (PILOT) agreement with the host municipalities and the Cossackie-Athens School District or with the Greene County IDA.”¹⁴

In addition, the PSS states that “as a consequence of the Facility’s relatively low marginal costs of production, in combination with the operation of other low-cost wind and solar plants elsewhere in the NYISO, there will be downward pressure on the market-clearing price of electricity in the ISO’s wholesale market, which will create substantial savings for New York’s ratepayers (analysis done for NYSERDA suggests that this reduction in price could be as much as \$2/MWh).”¹⁵

¹¹ PSS p. 2.

¹² PSS pp.6. 61.

¹³ PSS pp. 6-7.

¹⁴ PSS p. 50.

¹⁵ PSS pp. 50-1.

The PSS states that “overall, the Facility is anticipated to have long-term beneficial effects on the environment as a consequence of reduced fossil fuel use” as well as “significant, long-term beneficial effects on the use and conservation of energy resources.”¹⁶ The Application will also include a discussion of the Facility’s contributions towards addressing the problem of climate change.¹⁷

Comment:

- As referenced above, any decision by the Siting Board to approve the project must include a determination that the project will be a beneficial addition for the electric generation capacity of the state and that it will serve the public interest. To help the public as well as the Siting Board make this determination, the portions of the Application that address the potential benefits of the Facility must include a robust, clear and substantiated discussion and analysis of these potential benefits.

C. Potential Environmental Impacts and Mitigation

1. In General

The PSS acknowledges that “long-term unavoidable impacts associated with operation and maintenance of the Facility are ... anticipated to be limited, but could include solar modules’ visibility, impacts to wildlife habitat, impacts to cultural resources, and impacts to agricultural resources, and impacts to wetlands and streams.”¹⁸

Comment:

- As referenced above, PSL Article 10 requires a finding that the adverse environmental effects of the construction and operation of a proposed facility will be minimized or avoided to the maximum extent practicable, and that if there are “significant and adverse disproportionate environmental impacts” from a proposal, that “the applicant will avoid, offset, or minimize the impacts caused by the facility upon the local community for the duration that the certificate is issued to the maximum extent practicable using verifiable measures.” The preferred alternative for project design and layout selected by the Applicant must ensure

¹⁶ PSS pp. 50, 52.

¹⁷ PSS p. 52.

¹⁸ PSS p. 49.

that the impacts to all of the identified important resources that may be affected, i.e. visual, agricultural and habitat/ecological, are avoided and mitigated with equal consideration.

2. Ecological Resources: Including Plant Communities, Wildlife and Wildlife Habitat, Threatened and Endangered Species, Wetlands and Water Resources

The proposed 100 MW Flint Mine Solar Facility is one of several proposed large-scale solar PV projects in the Hudson Valley currently undergoing the Public Service Law Article 10 review process for major electric generation projects before the Siting Board. Together with the adjacent, 50 MW Greene County Solar Facility proposed by Hecate Energy, over 2,400 acres are under consideration as Facility Areas for large-scale solar PV development within the Grassland Habitat Focus Area as identified in the Greene County Grassland Habitat Management Plan.¹⁹ According to the PSS, lands protected by the Greene County Land Trust occur within the Study Area for the Facility.²⁰ In addition, some lands within the Facility Site occur within a Winter Raptor Concentration Area (WRCA), identified as important winter foraging and roosting ground for multiple raptor species, including the short-eared owl and northern harrier.²¹

The PSS states that Facility components have been sited to minimize impacts to habitat most valuable to sensitive species such as the short-eared owl (*Asio flammeus*) and northern harrier (*Circus hudsonius*). It further states that:

The Applicant intends to preserve and manage significant areas of grassland habitat within undeveloped areas of the Facility Site for the benefit of avian species including the northern harrier and short-eared owl. These areas will include habitat currently identified as valuable to both species, as well as lands succeeding out of grassland that can be restored to high-quality habitat. The Article 10 Application will include a comprehensive land management plan for the entire Facility Site, which will incorporate the findings and recommendations from all ecological studies and consultation conducted in support of the Application.²²

In addition:

Flint Mine Solar proposes not only a 100-MW-AC solar electric generating and battery storage Facility, but also a planned landscape that conserves and manages approximately 200 acres of

¹⁹ <https://www.greenelandtrust.org/images/stories/PDF/GreeneCountyGrasslandPlanFINAL6-20-2014.pdf>

²⁰ PSS, P. 28.

²¹ PSS p. 120.

²² PSS pp. 121-22.

grassland habitat and protects an important cultural resource, the Flint Mine, in perpetuity. Flint Mine Solar is committed to investigating innovative approaches to manage the Facility Site, such as seeding buffer areas with pollinator-friendly and visually appealing plants and flowers, and designating areas of the Facility that can be used to study the potential for symbiotic use of a solar facility by wildlife species, such as raptors and the small mammals they rely on for winter foraging opportunities.²³

On November 8, 2018, the Applicant held an Open House where it presented a series of maps demonstrating the siting considerations undertaken thus far for the Facility, as well as “Potential Grassland Habitat Management Areas” within the Northern, Eastern, and Western Areas of the Facility Site, and again stated a commitment to this opportunity to “guarantee the success” of important grassland habitat and paying for the entire 1,700 acre Facility Site.²⁴

Comments:

- The PSS includes a description of several types of Plant Communities found within the Facility Site, but does not define the term “grasslands.” The term “grasslands” should be defined and clearly related to the habitat types that are identified.
- The value of the grassland bird habitat at the Facility Site should be contextualized within the larger Cocksackie Flats (Greene County Grasslands) area.
- The PSS references raptor survey data collected by the New York State Department of Environmental Conservation (NYSDEC) for the last 10 years, and also indicates that the Applicant has supplemented this data with its own winter raptor surveys targeting short-eared owls and northern harriers from early January to early April, 2018 as well as a detailed analysis of potential habitat and habitat quality for these species within the Facility Site, which will be combined and summarized into reports provided and discussed within the Application.²⁵ In order for Scenic Hudson and other intervenors in this proceeding to be able to fully participate in a negotiation of stipulations as well as evaluate the Potential

²³ PSS p. 59.

²⁴ See Flint Mine Solar November 2018 Open House Presentation, <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-F-0087&submit=Search>.

²⁵ PSS p. 121.

Grassland Habitat Management Areas that the Applicant has proposed, we request that both the NYSDEC and the Applicant's survey data be made available to intervenors, subject to any required non-disclosure agreement, as soon as possible.

- Scenic Hudson is pleased with the Applicant's commitment to conserving grassland habitat. The proposed "Potential Grassland Habitat Management Areas" as presented by the Applicant at the November 8, 2018 Open House should be analyzed for compliance with the recommendations contained in the Greene County Grassland Habitat Management Plan for size, location, conservation value, and other metrics. The proposed conservation areas should be fully evaluated for their effectiveness in achieving the desired outcomes of grassland bird and raptor habitat retention. In addition, information on the funding structure for both the establishment and maintenance of the habitat management areas (the referenced "comprehensive land management plan") should be provided to the public as soon as possible.
- The Application should include provisions for pre- and post- construction monitoring of the Facility's impacts and/or benefits to grassland birds, water quality, and agricultural resources to help inform future projects, since as noted by the PSS, as one of the State's first utility-scale solar facilities, it will pave the way for future projects of its size, as well as the Applicant's commitment to "designating areas of the Facility that can be used to study the potential for symbiotic use of a solar facility by wildlife species, such as raptors and the small mammals they rely on for winter foraging opportunities."
- With regard to surface waters, the Application should include a flood standard for which any new culverts or bridges will be designed.
- Forested habitats should be surveyed for roosting Northern long-eared and Indiana bats (or at least the presence of potential roost trees), and if the species are found to be using any of the forested areas the applicant should provide an alternative to winter tree removal in order to mitigate indirect impacts to the species via habitat destruction.
- The carbon sequestration value of any cleared forest should be determined, and compared to the emissions reduction benefits of the Facility.

3. Agricultural Resources

According to the PSS, the Facility Site “consists largely of abandoned Agricultural land, although a minority of the land planned for PV modules has been farmed in recent years. Approximately 16% (274 acres) of the land within the Facility Site is actively farmed for hay or other crops, while approximately 35% (604 acres) consists of abandoned agricultural fields.”²⁶

Further:

The Facility will be located on sub-prime, mostly post-agricultural land that is not currently used by the landowners for profitable production of agricultural products. Of the approximately 260 acres of land that might be considered still to be actively farmed, 100 acres of former crop land was not planted in 2017 or harvested in 2018; 100 acres of hayfield wasn’t reseeded or fertilized in 2017 and only a small percentage was cut in 2018 (two years of bales remain unsold in the field) and the wet weather in 2018 severely curtailed the production of hay in another 40 acres (whose owner says costs as much to maintain as it produces). The remaining 20 acres produced hay for the landowner’s domestic consumption and for mulch, as the market for hay has been poor over recent years.²⁷

The PSS states that the Application will include “a discussion of the current agricultural use and productivity of farmlands within the Facility Site as informed by local farmers and landowners, and the County Soil and Water District. The Application will identify those agricultural lands which are used for row crops, regularly or in rotation, as well as agricultural lands used for pasture, hay, or other purposes.”²⁸

In addition:

With respect to agriculture, the Application will include a discussion of current trends (over the last 20 years) in land use changes, with specific focus on factors contributing to the conversion of farmland within a 2-mile radius of the Facility, and potential cumulative impacts of such conversion, as well as the types of land uses driving those conversions (e.g., renewable energy, suburban housing developments, commercial development, etc.). The Applicant will discuss the Facility’s potential effect on agricultural viability of lands within this study area, including the availability of farmland for existing farm operations, the potential increase in rental rates of farmland, and the potential increase in

²⁶ PSS p. 27. Elsewhere, the PSS states that “only approximately 5% of the Facility Site is currently used for agricultural production.” PSS p. 124. This should be clarified.

²⁷ PSS pp. 45-6.

²⁸ PSS p. 111.

the price of farmland. The Applicant intends to conduct interviews with landowners/farm operators within the Facility Site and review readily available historical data on trends in farmland use and acreage in Greene County. The Application will also describe measures during both construction and operation of the Facility that will be implemented to avoid and minimize impacts to on-site soils and adjacent agricultural uses.²⁹

Finally, per the PSS, Exhibit 22 of the Application will contain an evaluation of impacts on agricultural resources including “a quantification and analysis of temporary and permanent impacts to agricultural land based on the proposed footprint of all Facility components and associated limits of disturbance during construction.”³⁰

Comments:

- Since the Applicant is proposing to purchase and to establish a comprehensive land management plan for the entire 1,700 acre Facility Site, the evaluation of potential impacts to agricultural resources should be for the entire Facility Site, not only the footprint of Facility components and construction disturbance limits.
- The aerial photographs used to support the discussion of the current agricultural use of the Facility Site should be the most recent possible. The Applicant should check the state’s orthoimagery program for useable imagery and/or provide recent imagery captured by drone. In addition, the assertion that the project will only impact “sub-prime” agricultural land must be demonstrated with the inclusion of agricultural soils maps that delineate all prime and “prime if drained” soils, and soils of statewide significance.
- We encourage the Applicant to pursue ways to co-locate agricultural uses such as grazing and/or crops with energy production, and use pollinator-friendly plants in and among the arrays as discussed in the PSS.

²⁹ PSS p.28. This conflicts with the statement on p. 136 of the PSS that “As described in Stipulation 4, the Applicant will also include a discussion of historical trends in land use (with a specific focus on conversion of farmland) over the last 20 years within a 5 mile radius of the Facility. This will include a discussion of the Facility’s potential effect on the availability of farmland within five miles.” This discrepancy should be corrected and the reference to a Stipulation should be removed.

³⁰ PSS p. 136.

4. Visual Resources

According to the PSS, based on preliminary viewshed analysis by the Applicant, specific locations within the Facility Area were removed from consideration for PV module development due to their visibility.³¹ The PSS further states:

After construction, the presence of the solar arrays will not result in a significant change to the observable environment. Due to the strategic positioning of the arrays, the presence of natural screening from the north-south ridges, woods and thick rows of trees and the planting of natural screening measures where feasible, the Facility will be generally unnoticeable. Even when it is observable, it is unlikely to be a prominent feature. Evaluation by the Applicant's registered landscape architect indicates that the Facility's overall contrast with the visual/aesthetic character of the area will generally be minimal to nonexistent. However, based on the contrast rating scores, it is possible that the Facility will be observable from certain isolated locations.³²

The PSS indicates that a Visual Impact Analysis (VIA) will be included in the Application in order to "continue to evaluate potential visual impacts that would result from introducing the Facility into the landscape."³³ The PSS states that representative view points for visual simulations "will be selected based upon past and future consultation with, and feedback provided by members of the public, engaged stakeholders, municipal planning representatives, DPS, DEC and OPRHP."³⁴

The PSS indicates that the Application will include a Lighting Plan showing type, location, and height of installation of proposed exterior lighting fixtures for all Facility components, and an indication of the measures to be taken to prevent unnecessary light trespass beyond the Facility property line.³⁵

Comments:

- Scenic Hudson requests status as a stakeholder in the viewpoint selection process for the viewshed analysis and visual simulations to be included in the VIA.
- The Lighting Plan for the Facility should identify a need for Dark Sky lighting, which is important due to the rural nature of the Facility area. Dark Sky lighting,

³¹ PSS p. 148.

³² PSS p. 49.

³³ PSS p. 148.

³⁴ PSS p. 155.

³⁵ PSS p. 67.

including fill cut-off lighting, is lighting recommended by the International Dark Sky Association.³⁶

- There should be a provision in the Application for post-construction evaluation of the visual impacts of the Facility to ensure that the conclusions of the VIA were accurate, using the same rating forms for impacts to visual resources and the degree of visual change as used by the rating panels in the development of the VIA.

5. Cultural Resources

According to the PSS, the Facility Site and surrounding vicinity include numerous archaeological sites associated with Pre-Contact period (from approximately 13,000 years ago to approximately 500 years ago) Native American groups who exploited the abundant exposures of Mount Merino/Normanskill chert present in the local hills and ridges for stone tool production. These groups also made camps on the flats and lower hills and ridges throughout the area. Portions of the Facility Site are located within the Flint Mine Hill Archaeological District, which is listed in the National Register of Historic Places (or, NRHP).³⁷

The PSS states that to minimize potential impacts, the project will incorporate site design and construction elements to minimize the need for soil disturbance, including use of an aboveground electrical collection system.³⁸ The PSS also states that the Applicant has proposed potentially transferring ownership of the portion of the Flint Mine Hill site that is currently owned by the Southold Indian Museum to the ownership of the Archaeological Conservancy as a means to mitigate potential impacts to archaeological resources that could result from soil disturbance during construction of the Facility.³⁹

Comments:

- The Application and the VIA should include an evaluation of the potential visual impacts of an above-ground electric collection system.
- The Application should include details on the proposed land transfer for the Flint Mine Hill site, including the commitments of both the owner and potential owner

³⁶ <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>

³⁷ PSS p. 95.

³⁸ PSS p. 95.

³⁹ PSS p. 96.

of the property, and a discussion of whether this is considered off-site mitigation for cultural impacts and its potential benefits.

D. Cumulative Impacts Analysis

The PSS states that the Application will describe other proposed land use and/or development within the Study Area (a 2-mile radius). “This will include a discussion of the proposed Hecate Energy Greene County Solar Facility, which is a 50 MW solar project.”⁴⁰ The PSS further states that “a cumulative impact analysis will be conducted to evaluate the expected impacts from the construction, operation and maintenance of the Facility as they relate to other proposed and operating solar energy projects nearby the Facility and in the state, “including the “cumulative impacts of forest and grassland habitat fragmentation, particular potential impacts on listed bird species.”⁴¹

Comments:

- Scenic Hudson commends the Applicant for committing to include a cumulative impacts analysis for the two large-scale solar projects that are proposed to be located adjacent to one another in Greene County. Such an analysis is extremely important for both the public’s and the Siting Board’s understanding of the combined potential impacts of the two large-scale solar projects in terms of their visual impacts and effect on community character, as well as on ecological/habitat, agricultural, cultural, and socioeconomic resources, and how they interact. Such an understanding is critical to any determination that both of these projects should receive approvals pursuant to PSL Article 10.
- In particular, the cumulative impacts analysis should include a discussion of the adjacent Hecate Energy project’s potential impacts on the viability of the grassland habitat preservation areas proposed within the Facility Area.

E. Decommissioning, Site Restoration and Future Land Use

Per the PSS, “utility-scale PV facilities have a life expectancy of 20-40 years. At the end of its useful life, the Facility will be decommissioned, in accordance with a Decommissioning Plan.” The PSS states that “the proposed Facility will result in significant, *temporary* changes to

⁴⁰ PSS p. 28.

⁴¹ PSS p. 130.

land use within the footprint of the project.”⁴² The PSS further states that “the actual impact on existing topsoil in the Facility site will be minor, especially since grading will be avoided wherever possible. As a result, farming operations or other current land uses will again be possible following the Facility’s decommissioning.”⁴³

Comments:

- The Application should include a discussion of compliance with the restoration, monitoring and remediation, and decommissioning requirements for solar energy projects on agricultural lands contained in guidance issued by the New York State Department of Agriculture & Markets.⁴⁴
- The Application should address whether the land use impacts of the Facility will in fact be only “temporary” and the real potential for and feasibility of returning the land to agricultural or other use such as managed grassland after the life of the Facility. Information should be provided on the most likely restoration possibilities.
- The decommissioning cost estimate should include not only decommissioning but restoration costs estimates.
- The Decommissioning Plan should ensure that agreements with private landowners for any leased lands are all consistent and coordinated such that the site will be decommissioned and restored as a whole unit.
- The Decommissioning Plan as well as a restoration plan for the Facility must take into consideration the continuation of any established grassland habitat preservation areas and the proposed comprehensive land management plan for the Facility Site.

F. Alternatives/Impact Avoidance Measures

The PSS and Application are required to include “a description and evaluation of reasonable and available alternative locations for the proposed facility, including a description of the comparative advantages of the proposed and alternative locations, except that a private facility applicant may limit its description and evaluation of alternative location to parcels owned

⁴² PSS p. 29 (emphasis added).

⁴³ PSS p. 19.

⁴⁴ NYSDAM Guidelines for Agricultural Mitigation for Solar Projects (Revision 4/19/2019), available at: https://www.agriculture.ny.gov/ap/agsservices/Solar_Energy_Guidelines.pdf.

by or under option to such private applicant or its affiliates.”⁴⁵ In addition, the Application must contain “a description and evaluation of reasonable alternatives to the proposed facility at the primary proposed location including alternatives regarding general arrangement and design; technology; and scale or magnitude.”⁴⁶

1. Alternative Locations

The PSS states:

For private applicants such as Flint Mine, Article 10 limits the scope of the required alternatives analysis to the identification and description of siting alternatives to sites owned by, or under option to, the applicant or its affiliates. Therefore, the identification and description of reasonable and available siting alternatives to be addressed in the Article 10 Application will be limited to lands owned by or under contract/option to Flint Mine Solar or its affiliates, or to neighboring contiguous parcels that may be suitable for solar and whose owners would be open to leasing or selling to the Applicant, but who may not yet have entered into agreements with the Applicant. Ultimately, the Application will demonstrate that the proposed Facility Site is suitable for utility-scale solar energy generation, and why the selected location best serves the public interest and the environment.⁴⁷

Comments:

- While we recognize that the Applicant only has control over one Facility Site, the alternatives analysis should include a general discussion of potential alternative locations not only under control of the Applicant, but those that could potentially be under its control, in order to provide a full understanding of the Facility’s potential impacts and benefits. The existence of potential project sites that would use previously disturbed lands and/or provide for reduced impacts on agricultural, visual, and other important resources while still meeting the objectives of the Applicant should be explored in the Application. Such an analysis is vital to any determination of the Siting Board that the Facility will serve the public interest.
- The PSS states: “The parties agree that the Application will not include a fully developed evaluation of comparative advantages and disadvantages of alternate

⁴⁵ 16 NYCRR § 1000.5(l)(2)(viii); (x); *see also* § 1001.9(a).

⁴⁶ 16 NYCRR § 1001.9(c).

⁴⁷ PSS p. 46.

locations.” This statement (and others within PSS Section 2.9.2 Proposed Content of the Application) reads like a stipulation agreement, and should be revised.

2. *Alternative Layouts and Site Design*

The PSS states:

The Facility is being designed to avoid or minimize impacts to wetlands, sensitive wildlife habitat, archaeological resources, waterbodies, visibility and visual effects on adjacent areas, and other sensitive resources,” and that “the final design and locations of Facility components will be identified in detail in the Article 10 Application.”⁴⁸

It further states that:

The Applicant has sited the Facility on mainly open, level land in an effort to minimize the need for land clearing and typical construction processes such as surface grading, and soil compaction. The Applicant is also planning to use the least intrusive PV module mounting systems available to minimize soil disturbance, minimize impacts to archaeological resources, and to ensure that land could be restored to agricultural use or other comparable uses following the decommissioning of the Facility.”⁴⁹

In addition, the PSS states that “the consideration and continual refinement of the potential layout and size for the Facility has continued since 2017 The Facility design that will be presented in the Article 10 application will represent the culmination of multiple iterations of refinement to this initial layout in response to the results of regulatory consideration, on-site engineering, and environmental studies.”⁵⁰

Nevertheless, the PSS states:

The Applicant agrees to provide in the Application a discussion of alternative arrangements of Facility components within the Facility Site, including alternative layouts for PV solar modules and their rack/support systems. This discussion will include a comparative assessment of the environmental impacts, including a discussion of vegetative clearing, a discussion and comparison of known, estimated, and expected impacts to wildlife and habitat at all alternative sites and layouts, and the associated impacts under each alternative analyzed. This assessment of alternative layouts will include a discussion of how alternative layouts for the Facility

⁴⁸ PSS p. 3.

⁴⁹ PSS p. 3.

⁵⁰ PSS p. 53.

could help to avoid, minimize, or mitigate environmental impacts from the Project.⁵¹

Comment:

- The section of the Application that addresses alternate Facility designs of scale, interconnection configuration and magnitude should provide a breakdown of the costs and benefits of a range of alternative sizes for the Facility and their corresponding habitat conservation/mitigation benefits (i.e., 100 MW with a 200 acre habitat preserve, 80 megawatts with a 300 acre preserve, etc.)

3. Storage Alternative

The PSS states that the Applicant is considering the use of energy storage devices within the Facility, to improve its ability to delivery [sic] energy precisely when required by consumers and in turn to enhance the economics of the Facility.”⁵² According to the PSS, “pairing energy storage with solar will enable facilities like Flint Mine to capture and store solar energy when it is valued less by the NYISO’s wholesale electricity market, to be dispatched into the system when it is most valuable. This is anticipated to aid in the reduction of demand for less efficient, marginal and polluting “peaker” plants, often very old oil-burning plants in poor urban areas, which do not operate during most of the year, but exist to preserve reliability on summer days with the highest electricity demand.”⁵³

Comment:

- Scenic Hudson encourages the Applicant to include a robust analysis of a project alternative that includes storage in order to determine whether it can help to maximize the potential energy system and environmental benefits of the Facility.

4. Co-Location Alternatives

The PSS states that “any areas where soils disturbance occurs will be planted with a native, pollinator-friendly grass mix.”⁵⁴

⁵¹ PSS p. 57.

⁵² PSS p. 54.

⁵³ PSS p. 61.

⁵⁴ PSS p. 12.

Comment:

- In addition to using pollinator-friendly plantings in and among the solar arrays, the alternatives analysis should study the potential for co-location of solar energy production and agricultural use, such as grazing or appropriate crops.

5. No Action Alternative

The PSS states that the no action alternative would result in the loss of significant grassland habitat through natural successional processes.”⁵⁵

Comment:

- The Application should include a full discussion and analysis of this conclusion.

G. Compliance with Local Laws

The PSS states that “it is the Applicant’s desire to comply with all substantive local laws and ordinances, such that [waiver requests of the Siting Board] are not necessary.”⁵⁶

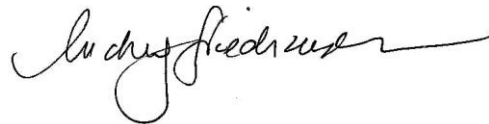
Comment:

- Pursuant to PSL Article 10, the Application must demonstrate that the Facility complies with local laws concerning the environment and public health and safety that are not unduly burdensome.

V. CONCLUSION

Thank you for your attention to these comments on the Preliminary Scoping Statement for the proposed Flint Mine Solar Facility.

Respectfully submitted,



Audrey Friedrichsen, Esq., LL.M.
Scenic Hudson, Inc.

⁵⁵ PSS p. 56.

⁵⁶ PSS p. 178.

From: [Robert C Hallock](#)
To: [Matthew Robinson](#)
Subject: Flint Mine Solar Facility Identification of Visually Sensitive Resources Official Request for Information
Date: Sunday, April 28, 2019 5:08:46 PM

[EXTERNAL SENDER]

Matthew Robinson
Environmental Design and Research

I have reviewed your letter of April 8, 2019. As President of the Greene County Historical Society, which operates the Brocnck Museum and Vedder Research Library at 90 County Route 42 in Cocksackie, NY, I want to express two concerns.

First, I attended a meeting held by Flint Mine Solar at Pegasus Restaurant a few months ago. At that meeting I expressed concern about the property directly south of the Society property, owned by Sbarboro. The map I received prior to the meeting showed solar fields being located on that property directly south of the Society property. The response was that the map was out of date and they were no longer considering locating solar panels there. The map in your letter of April 8 shows the Sbarboro property included. Which is it, the Sbarboro property is included or is not included. If included what mitigating steps are planned?

Second, I asked at that meeting at Pegasus about Flint Mine Hill Archaeological District, which is listed as a National Historic Site. The response was that they would have to do some kind of protection but were not aware of the listing. Clearly it is listed and has been since 1978. Yet you don't have it on the list. Will the list be amended to include the Flint Mine Hill Archaeological District and appropriate measures for mitigation be undertaken?

Robert C. Hallock,
President, Greee County Historical Society

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November 30, 2018

VIA EMAIL

Hon. Kathleen H. Burgess
Secretary, NYS Board on Electric Generation
Siting and the Environment
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RE: Case 18-F-0087 – Flint Mine Solar – Town of Coxsackie Comments on the PSS

Dear Secretary Burgess and Mr. Doyle:

This firm, along with Barton & Loguidice, D.P.C., represents the Town of Coxsackie (the “Town”) with regard to the above-referenced proceeding. The Town appreciates the opportunity to participate in this proceeding and to bring their questions and concerns before the Siting Board early in this process.

The following comments are submitted in response to the Preliminary Scoping Statement (“PSS”) filed on November 6, 2018 by Flint Mine Solar, LLC (“Flint Mine” or the “Applicant”) for the Applicant’s proposal to construct a 100-megawatt photovoltaic solar facility in the Towns of Coxsackie and Athens, in Greene County, New York (the “Project”). The subheadings and related comments set forth below are organized for convenience in the order they appear in the PSS and such order is not indicative of the level of importance of any of the subject matter.

Facility Description¹

In its PSS, the Applicant has defined “Facility” as the physical components and features of the Project (PSS at 3). As is suggested by the Applicant, all primary and ancillary components of the Project, including but not limited to panels, mounts, electrical connections, points of interconnection, switchyards, substations, transformers, inverters, batteries, storage facilities, distribution lines, operation and maintenance (O&M) facilities, storage structures, and fencing should be considered part of the Facility and analyzed in all impact studies. Given that construction of the Project could occur over a couple of years, it is crucial that such impact analyses also consider any temporary physical components of construction and operation such as trailers, portable toilets, lay-down areas, temporary storage structures, cranes, and other tools and machinery.

In its PSS, the Applicant proposes only a two-mile radius Study Area for all impacts except those pertaining to certain visually sensitive resources of regional or statewide significance (PSS at 149). The Article 10 Regulations provide however that, “[f]or large facilities ... with *components spread across a rural landscape*, the study area **shall** generally include the area within a radius of **at least five miles** from all generating facility components, interconnections and related facilities and alternative location sites” (16 NYCRR 1000.2(ar) (emphasis added)). The Regulations also contemplate the need for adjustment of the study area in areas of significant resource concerns, which abound in the region of the proposed Project area. For these reasons, the Applicant should be required to broaden its Study Area, for all impact studies, to a five-mile radius.

Taxes and PILOT Agreements

The Applicant states in Section 1.2 of its PSS that the Facility will “result in increased revenues to county and local municipality tax bases” (PSS at 7). In its Application, the Applicant should elaborate on this anticipated increase in tax revenue, including an estimated value of such increase for the Town over time. The Applicant should also consider whether any decrease in real property tax revenue will result from impacts on neighboring property values.

The Applicant has also indicated that it intends to negotiate a PILOT agreement with the host municipalities (PSS at 50). The Applicant should identify how it intends to negotiate PILOTs with the two host municipalities in a way that is fair and equitable. According to the Applicant, about two-thirds of the total Project land is located within the Town of Cossackie, so the Project will have a greater impact on the Town of Cossackie’s real property tax base than the Town of Athens. Furthermore, the Applicant should consider which municipality’s resources and infrastructure will be more affected by the Project when negotiating the PILOT agreement and any other benefit or restoration agreements. For example, the Applicant should consider which municipality (if any) is responsible for maintenance of the roadways that will be most traversed by the Applicant when negotiating roadway restoration agreements. Finally, any payments made by the Applicant as a result of these agreements should be increased over time to account for inflation.

¹ The materials submitted by the Applicant in its PSS and presented to the public at its Open House appear to show that some of the panels are noncontiguous. Nevertheless, the Applicant’s maps and figures, such as Preliminary Facility Layout depicted in PSS Figure 3, show that the entire Facility area within which the parcels are sited is contiguously owned or otherwise controlled by the Applicant. Based on these Figures supplied by the Applicant, the Town assumes that the entire Facility area is contiguous, and therefore is not raising the contiguity of the Facility as an issue at this time.

Land Use

According to the Applicant, approximately 274 acres, or 16% of the total Facility area is considered actively farmed (PSS at 27). Preservation of farmland and agricultural resources is critically important to the Town and Greene County. The Town and Village of Coxsackie Community Plan (June 2008) (the “Comprehensive Plan”) identifies that 10.7% of land in the Municipalities is comprised of agricultural properties, and states that “these open spaces also help define the Town’s rural character and quality of life.” The Comprehensive Plan also articulates the vital role agriculture plays in supporting the local economy and echoes the Town’s commitment to preserving agricultural land as much as possible. Therefore, the Applicant should take extra care to preserve the status of active farmland in the Facility area, so as to avoid contributing to the loss of active farmland in the region. The Applicant should identify the parameters it is utilizing to differentiate between active and abandoned agricultural land, and should confer with willing local farmers to determine which lands within the Facility area could be economically viable farmland. Any such identified lands within the Facility area should also be avoided as much as possible. The Applicant should also confer with willing local farmers as to farmland protection and mitigation measures, as local farmers likely have insights and suggestions based on farmland characteristics unique to Greene County. For example, often farmers are dependent upon large landowners to rent fields to supplement their agricultural activities on land that is owned by the farmer. It is not clear if or how the Applicant has taken these impacts into account.

The Applicant states that the “proposed Facility area will result in significant, *temporary* changes to land use within the footprint of the project” (PSS at 29 (emphasis added)). However, the Applicant has indicated that the proposed Project will last at least 40 years, and could continue indefinitely provided that there is no substantial change to the project as it was approved. Therefore, this “temporary” change could have significant effects on the land use of the proposed Facility area for generations. This is especially true of active farmland, since the odds of its return to active use will rapidly decline while the land is used for other purposes. For these reasons, the Applicant should avoid disrupting the active farmland within the proposed Facility area as much as possible. In the event that siting infrastructure on active or otherwise economically viable farmland cannot be avoided, the Applicant should identify these areas, discuss their alternatives, and provide justification as to why such areas could not be avoided.

The Applicant states that the soils within the Facility Site will not be treated with fertilizers, herbicides, and pesticides, but that specific treatments may be necessary based on changing conditions (PSS at 10, 29). Should chemical application become necessary, the Town should be given advanced notice of such application. In particular, the Town should be provided with an explanation as to the changing conditions that caused such treatment to become necessary, the chemicals that the Applicant intends to apply, the manner in which such chemicals will be applied, and a detailed plan of how the Applicant intends to contain such chemicals and avoid chemical runoff from entering the nearby watershed.

The Applicant generally states that “construction and operation of solar energy projects does not typically require extensive land clearing or significant soil disturbance” and also indicates that the Project will not require extensive tree clearing” (PSS at 29). Generally speaking, the Town requests that the Applicant should commit to avoiding disturbance of the land, soil, plants, and habitats as much as possible. As part of its Application, the Applicant should provide a more detailed picture of how much land clearing, soil disturbance, and tree clearing will actually occur as a result of the Project, and how it intends to return the land back as the Applicant found it. In particular, the Application should identify how many acres of land will be cleared or otherwise disturbed, the location of such land, the justification for its clearing or disturbance, and its plan to restore the land at the end of the Project’s life. In addition to disturbances that

will occur for the duration of the Project, the Applicant should consider the effect of temporary disturbances that will occur during construction.

Particularly with respect to tree clearing, the Applicant has stated that the acreage of tree removal will be discussed in the Application (PSS at 67). Additionally, the Applicant should be required to inventory the number of trees removed, identify their location, and describe the mechanism by which they will be removed. Given that these trees provide important habitats to many species in this region, some of which are categorized as threatened or endangered, the Applicant should consider offsetting the number of trees cut to reduce habitat and greenscape loss by planting like, native trees, which could be incorporated into the Applicant's landscaping plan for visual screening.

Construction

In its PSS, the Applicant states that it may need to utilize equipment lay-down areas. The Applicant should ensure that any such areas are appropriately cordoned off so that access is restricted to those areas for safety and security reasons. Furthermore, given that construction could continue over a period of two years, the Applicant should consider visual and aesthetic impacts when siting and maintaining these areas. The same safety and visual concerns also apply to other construction tools and machinery, such as the 25-50-foot cranes that the Applicant states it may need to employ (PSS at 70).

Cultural Resources

The Applicant states in its PSS that that Applicant is considering permanent preservation of the Flint Mine Hill archaeological site ("Flint Mine Hill") (PSS at 95). Generally, the Town is in support of preserving historic Flint Mine Hill. However, the Town as host community of this site believes it should be involved in the negotiation and preservation process. In particular, any permanent conservation easement placed on Flint Mine Hill should conform with the Town's Comprehensive Plan. Furthermore, that Applicant should consider allowing certain recreational uses within Flint Mine Hill so as to encourage tourism and visitors to the region. The Applicant should also illustrate on a map where it intends to place a conservation easement, and wherever possible, should make any resulting easement agreements available to the public.

In its discussion of potential mitigation measures for archaeological resources, the Applicant states that it is exploring "the possibility of installing an aboveground electrical collection system via conduits on the ground surface or on ballast blocks" (PSS at 97). The Applicant must fully address all potential impacts associated with this option, including but not limited to all safety and visual impacts, as well as any ecological impacts such a structure may have on the wildlife and landscape of the Facility Site.

Terrestrial Ecology and Wetlands

The PSS states that, "[d]ue to the fact that tree clearing will occur during the winter months, impacts to the Indiana bat are not anticipated from construction and operation of the Facility" (PSS at 119). While it is true that the Indiana bat may not presently reside in the trees during winter tree clearing, such clearing will nonetheless greatly impact the bats because it will result in springtime habitat loss. The Applicant should therefore address how it intends to reduce such an impact. For example, replacement in kind of trees cleared by the Applicant, as described in the Land Use comments above, could reduce such an impact.

As depicted by the PSS Figures, a significant portion of the proposed Facility area contains wetlands. Therefore, the Applicant should ensure that it is considering wetlands impacts such as runoff, contamination, sedimentation, and erosion for all phases and components of the Project.

Visual Impacts

The Town is particularly concerned with the visual impacts that the proposed Project will have on viewsheds located throughout the Town, as well as views from neighboring properties that could negatively affect property values. It is therefore of critical importance to the Town that the visual impacts be extensively evaluated for each alternative layout of the proposed Facility, and taken into consideration when selecting the final layout of the Facility. Furthermore, the Applicant sets a five-mile radius Study Area to be evaluated for visual impacts. However, the Applicant states in its PSS that visibility of the tallest structures of the Facility, which the Applicant identifies as lighting masts and loop-in structures, will only be considered within one mile of their location on the proposed Facility site (PSS at 149). The visibility of the tallest structures should also be analyzed in the five-mile radius Study Area, along with the rest of the Facility components, rather than limited to a one-mile radius as Applicant has proposed.

The Applicant has stated that the visual impact analyses conducted thus far have been based on the existing landscape and topography of the region. However, in the event that the Applicant identifies areas that will need to be cleared for the purposes of the Project, the Applicant should revise its visual impact analysis to reflect those alterations it causes to the landscape.

Finally, the Town has requested a copy of the visual simulation video that the Applicant references on page 148 of the PSS. The Applicant stated that the video is no longer accurate because the positioning of the panels has since changed. The Town believes that the Applicant should update this video accordingly and make it available to the public as soon as possible.

Transportation

The Town is responsible for the maintenance and upkeep of their local roads. Rural Towns and Town Highway Superintendents devote considerable sums to roadway maintenance. Addressing this issue early in the process is therefore critically important to the financial considerations of the local communities. The PSS indicates that the Application will include “a description of all use and restoration agreements, including repair of roads damaged by heavy equipment or construction activities during construction or operation of the Facility” (PSS at 158). The Town and Village request that any roadway restoration agreements be negotiated as part of the Stipulations, so that sufficient information can be provided in the Application on such impacts. Similarly, extensive communication with the local Fire Companies to address firefighting means and methods is needed, as the access roads are proposed to be approximately 15 to 20 feet wide and constructed of gravel. Enough information should be provided to demonstrate that the access roads will be open in the winter (snow removal), and capable of supporting the weight of the firetrucks in the Spring and Fall when wetter conditions prevail.

Local Laws and Ordinances

The Applicant has very generally set forth the relevant chapters and sections of the Towns’ Codes, as well as applicable local procedural requirements (PSS at 174-75). However, the Applicant fails to describe how it intends to seek review and approval for its Project where there are two municipal entities involved. For example, the Applicant states that municipal officials are “generally responsible for reviewing and approving local building permits and ensuring compliance with the New York State [Uniform Code]” (PSS at 175), but does not describe how it intends to work with both Towns for its approvals where both entities have jurisdiction. The Applicant should include a plan in its Application that outlines how the Applicant will cooperate with both Towns.

Comprehensive Plan

The Applicant briefly lists applicable sections of the Town's Code, but does not address the Town's Comprehensive Plan. The Town's Comprehensive Plan states that "it is important that this Plan be implemented and used as recommended since the Plan comprises the choices of Coxsackie's citizenry about the way they want to live. The integrity of the Town and Village Zoning Law also depends on it." Among the list of actions that the Towns considered when developing the Plan include Agriculture Actions, Infrastructure Actions, and Natural Resources and Open Space Actions.

Agriculture Actions

For the reasons stated above, the Town's agricultural resources are critical to the economic health of the Town and Greene County. In addition, the Comprehensive Plan sets forth actions for the Towns to consider in protecting farmland. Among the Agricultural Actions listed are:

- 1.3 "Require that new development comply with all agriculture regulations. Require full compliance with new and existing regulations such as NY AG and Markets Law-25AA, Town of Coxsackie Right to Farm Law, zoning and site plan review laws when the proposed development is in or near an agriculture district, or in proximity to areas of active farming.
- 1.4 Require impact assessment of developments affecting land in agricultural use. Require developers to analyze the impacts to the land (changes in topography, water courses, drainage patterns, etc.) to local and regional farmers (e.g. effect of diminishing the critical mass of farms), economy, employment (type of, skill sets), etc. of the change in land use."

Based on these recommendations and the location of the Project in an Agricultural District, the Applicant must be required to comply with the Comprehensive Plan, and more specifically, set forth in the PSS how the Project will impact farmland in accordance with Section 1.4 of the Agricultural Action Plan.

i. Infrastructure Actions

In relation to new infrastructure development, the Plan states at Article V, Subsection 5:

"As new development occurs in the Town and Village, the community has an opportunity to utilize standards that guide the construction of new infrastructure. Issues that the Town and Village may choose to address could include capacity, materials, construction methods, utility locations etc. Specific recommendations may include:

- 5.1 The Town and Village should consider local regulations that would require all utilities be buried underground to the maximum extent possible in all new development areas. Burying electrical, telephone and cable utilities can provide an aesthetic benefit as well as improve reliability by reducing the occurrences of loss of services due to weather, accidents or other impacts."

The Applicant should address in the PSS how it will comply with this recommendation, especially with respect to the transmission lines it is proposing.

ii. Open Space and Habitat Actions

The Town's Comprehensive Plan also identifies that "[o]verall, the Town and Village of Coxsackie have only a limited amount of land permanently dedicated to open space. While the community has strongly voiced their support for the maintenance of the community's rural character, the Town and Village currently lack important tools to make this happen." The Plan sets forth the following actions to protect open space and natural habitat:

- 3.1 "The Town and Village of Coxsackie will work with the GCSWCD, Greene County Habitat Advisory Committee, Greene Land Trust, and others to identify important habitat and open space resources in the community. This inventory and evaluation will result in the establishment of regulatory overlay zones that delineate critical habitat and open space resources within the community.
- 3.2 The Town and Village of Coxsackie will establish, by local law, open space/habitat protection standards that can be applied to new development projects or those projects where substantial redevelopment is proposed. The standards will be applied in established overlay zones based on the protection of critical habitat or open space areas and should build upon the existing work of the GCSWCD and GCIDA. A primary focus of these standards should be the protection of grassland habitat, with a minimum mitigation ratio of 1:1 established that will impact greater than ten (10) acres of grassland habitat.
- 3.5 Develop protection standards to protect critical environmental resource areas. Protection will be provided to currently established habitat areas, extensive wetland complexes and other important natural resource features that may be identified in a natural resources inventory for the community. All development will be prohibited in these protected areas."

The Town has specific local laws related to standards for projects affecting wildlife habitat (see Sections 201-50 of the Town Code). Thus, in addition to the Wildlife Impacts discussion above, the Applicant should specify how it intends to comply with the standards included in the wildlife habitat provisions of the Town Code.

Town Code

The Applicant has very generally set forth the relevant chapters and sections of the Town Code that may apply. Specifically, the Applicant acknowledges that the Town has a moratorium on the installation of solar energy systems in effect as it updates its solar ordinance. On November 15, 2018, the Town adopted Local Law 2 of 2018, which amends the Town Code to add new solar laws that will be effective immediately upon filing with the Secretary of State in accordance with Section 27 of the Municipal Home Rule Law (the "Town Solar Law"). A copy of the Town Solar Law has been attached hereto as **Exhibit A**. Given that the Applicant's Project is a Utility Scale Solar Collector System as defined in Section 3 of the Town Solar Law, the Applicant must show as part of its Application, in addition to the other sections of the Town Code identified as applicable in the Applicant's PSS, that the Project complies with all relevant substantive requirements of the Town Solar Law. This includes, without limitation, all use regulations and restrictions, bulk and area requirements, lot coverage, and all other requirements pertaining to Utility Scale Solar Collector Systems as further described in Section 6 of the Town Solar Law.

Socioeconomic Impacts

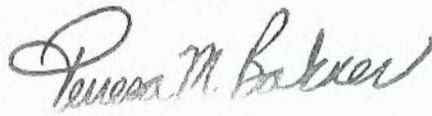
The Applicant has not described any socioeconomic benefit that the Town would receive from the Project as the host community. The Project will only provide temporary jobs, despite taking away over

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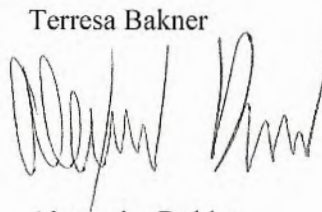
1,700 acres of property that could provide permanent employment by other industries. Furthermore, poor siting and effect on valuable environmental and cultural resources in the area would discourage tourism and potential new residents and homeowners. In its Application, the Applicant should consider how it intends to mitigate these impacts, including consideration of recreational trails to promote tourism and visitors to the region to provide some benefit to the host community.

The Town looks forward to working with the Applicant and the Siting Board in the development of the stipulations and ultimately in the review of the Article 10 application for this Project. The Town intends to fully participate in this process to ensure that local views are considered in the development of this project. Moreover, the Town reserves the right to provide additional comments on the PSS.

Sincerely,



Terresa Bakner



Alexandra Dobles

cc: Active Party List

Enclosures

EXHIBIT A

TOWN OF COXSACKIE
LOCAL LAW 2 OF 2018
A LOCAL LAW TO AMEND THE CODE OF THE TOWN OF COXSACKIE,
CHAPTER 167 TITLED “REGULATION AND APPROVAL STANDARDS FOR
SOLAR COLLECTION SYSTEMS”

§1. Authority.

This Law is adopted pursuant to sections 261-263 of the Town Law of the State of New York which authorizes the Town of Coxsackie to adopt zoning provisions that advance and protect the health, safety and welfare of the community, and pursuant to the New York State Constitution, and New York State Municipal Home Rule Law §10 and §20.

The Code of the Town of Coxsackie Chapter 167 titled “Regulation and Approval Standards for Solar Energy Collection Systems” be and the same hereby is revised and replaced with the following which law shall be known and cited as the "Revised Town of Coxsackie Regulation and Approval Standards for Solar Collection Systems."

§2. Title, purpose and intent.

The Town of Coxsackie recognizes that solar energy is a clean, readily available, and renewable energy source. It further recognizes that energy generated from solar energy collection systems can be used to offset energy demand on the grid where excess solar power is generated.

The Town of Coxsackie has determined that revised comprehensive zoning regulations regarding the development of solar energy collection systems are necessary to protect the interests of the Town, its residents, property values, limited farmland and businesses. This article aims to accommodate solar energy collection systems while balancing the potential impact on neighbors and preserving the rights of property owners to install solar energy collection systems, where such systems are appropriate in light of competing public interests in other existing uses. This article is intended to promote the effective and efficient use of solar energy resources; set provisions for the placement, design, construction and operation of such systems in such a way as to be consistent with the Town of Coxsackie Comprehensive Plan; to uphold the public health, safety and welfare; and to ensure that such systems will not have a significant adverse impact on the environment or on the aesthetic qualities and character of the Town and are compatible with the community investment in sewer and water, community character and its desire to preserve and protect areas of economic and agricultural significance to the Town.

It is not intended by this article to abrogate or impair existing conditions previously made or permits previously issued relating to the use of buildings. Whenever this article imposes a greater restriction upon the use of buildings or premises than is required by existing provisions

of law, ordinance or regulations, the provisions of this article shall control. More restriction is intended.

§3. Definition.

The following words, terms and phrases, when used in this article shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

SOLAR ENERGY COLLECTION SYSTEM- A system of components intended for the collection, inversion, storage and/or distribution of solar energy and that directly or indirectly generates thermal, chemical, electrical or other usable energy. A solar energy collection system consists of, but is not limited to, solar collectors, mounting devices or structures, generators/turbines, water and energy storage and distribution systems, storage, maintenance and/or other accessory buildings, inverters, fans, combiner boxes, meters, transformers and all other mechanical structures.

FLUSH MOUNTED SOLAR ENERGY COLLECTORS- A Rooftop-Mounted Solar Energy System with Solar Panels which are installed flush to the surface of a roof and which cannot be angled or raised.

ROOFTOP-MOUNTED SOLAR ENERGY COLLECTORS- A Solar Energy System in which Solar Collectors/Panels are mounted on the roof of a building or structure either as a flush-mounted system or as panels fixed to frames which can be tilted to maximize solar collection.

GROUND-MOUNTED RACKS & FREE STANDING SOLAR ENERGY COLLECTORS - A solar energy collection system that is anchored to the ground either directly or attached to a pole or other mounting system, detached from any other structure.

EXPEDITED PROCESS- The application, review and approval process for rooftop and flush mounted solar energy collection system with a rated capacity of 25 kW or less, as set forth in §4 (B) and (C) of this Chapter.

NET-METERING - A billing arrangement that allows solar customers to receive credit for excess electricity which is generated from the customer's Solar Collection and delivered back to the grid so that customers only pay for their net electricity usage for the applicable billing period.

QUALIFIED SOLAR INSTALLER - A person who has skills and knowledge related to the construction and operation of Solar Energy Systems (and the components thereof) and installations and has received safety training on the hazards involved. Persons who are on the list of eligible photovoltaic installers maintained by the New York State Energy Research and Development Authority (NYSERDA), or who are certified as a solar installer by the North

American Board of Certified Energy Practitioners (NABCEP), shall be deemed to be qualified solar installers for the purposes of this definition. Persons who are not on NYSERDA's list of eligible installers or NABCEP's list of certified installers may be deemed to be qualified solar installers if the Town Code Enforcement Officer or such other Town officer or employee as the Town Board designates determines such persons have had adequate training to determine the degree and extent of the hazard and the personal protective equipment and job planning necessary to perform the installation safely. Such training shall include the proper use of special precautionary techniques and personal protective equipment, as well as the skills and techniques necessary to distinguish exposed energized parts from other parts of electrical equipment and to determine the nominal voltage of exposed live parts.

SMALL-SCALE SOLAR COLLECTOR SYSTEM- Any solar energy collection system that cumulatively on a parcel meets all of the following provisions:

- a. is an accessory use or structure, designed and intended to generate energy primarily for a principal use, located on that lot.
- b. produces more than twenty five (25) kilowatts (kW) of energy, and is a solar-thermal system which serves only the buildings to which it is attached and/or accessory to and does not provide energy for any other buildings or structures beyond the parcel or lot.
- c. a system that does not exceed the production or output limits and otherwise conforms to the requirements of this paragraph shall not be excluded from designation as a Small-Scale Solar Collection System as a result of selling or otherwise receiving credits or benefits for excess energy provided to the distribution grid under a net metering agreement.

UTILITY SCALE SOLAR COLLECTOR SYSTEM- A solar energy collector or collectors or other devices or a generation facility or area of land principally used to convert solar energy to electricity, whether by photovoltaics, concentrating solar-thermal devices or various experimental solar technologies, designed and intended to supply energy primarily into a utility grid for sale to the general public or to supply multiple users located off the site on which the energy system is located.

DECOMMISSIONING PLAN-Detailed steps to remove unused or inactive solar energy systems, the elimination of all safety hazards, the remediation of the site, cost estimates to accomplish these requirements, and the provisions of financial security therefor.

PRIME FARMLAND- Land designated as "Prime Farmland" in the U.S. Department of Agriculture Natural Resources Conservation Service's Soil Survey Geographic Database that has the best combination of physical and chemical characteristics for producing food, feed, forage,

fiber and other crops and is available for these land uses.

SOLAR LOT (utility scale)- One or more contiguous parcels under direct control (ownership or lease) of a common owner.

SOLAR LOT COVERAGE-Area of solar panels and any appurtenances.

§4. Solar collector systems with a rated capacity of 25 kW or less.

A. Applicability.

Rooftop and flush mounted solar collector system with a rated capacity of 25kW or less are permitted in all zoning districts within the Town and may utilize the expedited solar permitting process.

Ground mounted and free standing solar energy collector systems with a rated capacity of 25kW or less are permitted in all zoning districts within the Town, except the High Density Residential 1(HDR-1) and High Density Residential 2 (HDR-2) districts, upon the issuance of a special use permit in accordance with §5 of this chapter. These systems shall be subject to all the requirements set forth in §5(C)(2) of this chapter. Ground-mounted and free standing systems may not utilize the expedited solar permitting process.

B. Purpose and Intent.

The expedited solar permitting process uses a unified permit across participating municipalities in New York State. A combined building and electrical permit for a grid tied solar electric system will be issued pending proper completion of forms, submission of approved plans and approval by municipality.

The expedited solar permitting process shall be applicable to all rooftop and flush mounted small solar collector systems with a rated capacity of 25kW or less, whether intended for personal use or commercial use, provided the system is intended to generate energy primarily for a principal use or structure located on that lot.

C. Application, Review and Permitting for systems qualifying for the expedited permitting process.

(1) Items to be submitted.

(a) Unified Solar Permit for Small-Scale Solar Electric Systems and an Eligibility Checklist; and

(b) A set of plans which must include the Project address, section, block and lot number of the property and the Owner's name, address and phone number and the

name, address and phone number of the person preparing the plans;

(c) A Site Plan showing location of major components of solar system and other equipment on roof or legal accessory structure. This plan should represent relative location of components at site, including, but not limited to, location of solar panel array, existing electrical service location, utility meter, inverter location, system orientation and tilt angle. This plan should show access and pathways that are compliant with New York State Fire Code, if applicable.

(d) One- line or three- line electrical diagram detailing the installation and associated components which shall include:

[1] Specification Sheets for all manufactured components. If these sheets are available electronically, a web address will be accepted in place of an attachment, at the discretion of the Code Enforcement Officer.

[2] All diagrams and plans must be prepared by a PE or RA as required by New York State law and include the system capacity in kW DC.

(2) Upon receipt and verification of each of the above items, the Code Enforcement Officer shall issue a building permit for the construction and completion of the roof top or flush mount solar collection system.

§5. Regulation and approval standards for small-scale solar collector systems.

A. Purpose and intent.

(1) The purpose of these regulations is to balance the potential impact on neighbors where solar collectors may be installed near their property while preserving the rights of property owners to install solar collection systems without excess regulation. These regulations are not intended to override the New York State Agriculture and Markets Law.

(2) Solar energy is a renewable and non-polluting energy resource that can prevent fossil fuel emissions and reduce energy load. Energy generated from solar energy systems can be used to offset energy demand on the grid when excess solar power is generated.

B. Applicability.

(1) The requirements herein shall apply to small-scale solar collector system installations modified or installed after the effective date of this section with a rated capacity of greater than 25 kW, and all ground mounted and free standing systems with a capacity up to 25kW.

(2) Solar collector system installations for which a valid building permit has been properly issued, or for which installation has commenced before the effective date of this section, shall not be required to meet the requirements of this section, except in accordance with Safety provisions found in this section. Any modification, expansion or alteration to an existing solar collector system shall only be permitted in accordance with §§201-70 and 201-71 of the Town of Coxsackie Zoning Law.

C. Permitting.

(1) Rooftop and flush-mounted solar collectors. Rooftop and flush-mounted solar collectors are permitted in all zoning districts in the Town of Coxsackie subject to the following requirements:

(a) Building permits shall be required for installation of all rooftop and flush-mounted solar collectors.

(b) Height limitations for structures found in this zoning law, shall apply.

(c) Rooftop and flush-mounted solar collector systems are permitted on the following structures:

[1] All principal structures.

[2] All accessory structures that meet the principal structure setbacks as required in each zoning district.

(d) Rooftop units must be three feet from any chimney and shall not be permitted on any roof overhangs.

(e) Any solar collector system attached to a pitched roof shall not extend more than three feet from the surface of the angle of the roof.

(2) Ground-mounted and free standing solar collectors. Ground-mounted racks and freestanding solar collectors are permitted as an accessory structure in all zoning districts in the Town of Coxsackie, except the High Density Residential 1 (HDR-1), High Density Residential 2(HDR-2) and the Waterfront Residential (WR) districts, subject to the following requirements:

(a) Site plan review and a special use permit from the Planning Board are required for all ground-mounted racks and freestanding solar energy collectors.

(b) All ground-mounted racks and freestanding solar collectors shall have a maximum height of 15 feet from ground elevation.

(c) All ground-mounted racks and freestanding solar collectors installed in the side or rear yards shall comply with, at a minimum, the setback requirements for a principal structure for that zoning district.

(d) Solar collectors are not be permitted in any front yard.

(e) Solar collectors shall be located in a manner that no shading of adjacent property occur and no shading occurs at the property line.

(f) Ground-mounted solar energy collectors shall comply with the most restrictive, setbacks, area, yard and bulk regulations in each applicable zoning district provided in the Zoning Law of the Town of Coxsackie in which such system is constructed.

(g) Setbacks. Further setbacks and bulk restrictions may be required by the Planning Board as part of the site plan review and as a condition of approval in addition to those set forth in this Article in order to protect the public's safety, health and welfare.

(h) Ground-mounted solar energy collectors shall be screened from adjoining lots and street rights of way through the use of architectural features, earth berms, landscaping, fencing or other screening which will harmonize with the character of the property and the surrounding area.

(i) The ground-mounted solar energy collectors shall be located in a manner to reasonably minimize view blockage for surrounding properties.

(j) Neither the ground-mounted solar energy system, nor any component thereof, shall be sited within any required buffer area.

(3) General Requirements Applicable to Small Scale Rooftop-Mounted and Ground-Mounted Solar Energy Systems.

(a) All solar collector installations must be performed by a Qualified Solar Installer and designed, erected and installed in accordance with applicable Codes, Regulations and industry standards.

(b) Solar energy systems, shall be permitted only to provide power for use by owners, lessees, tenants, residents or other occupants of the premises on which they are erected, but nothing contained in this provision shall be construed to prohibit the sale of excess power through a net-metering arrangement in accordance with New York Public Service Law §66-j or similar state or federal statute. However, solar energy system applications in a residential setting and serving a residential use on a single parcel or lot

shall be limited to 25kW or less.

(c). Prior to operation, electrical connections must be inspected by a Town Code Enforcement Officer and by an appropriate electrical inspection person or agency, as determined by the Town.

(d) Any connection to the public utility grid must be inspected by the appropriate public utility and proof of inspection shall be provided to the Town.

(e) Solar energy collection systems shall be maintained in good working order.

(f) Solar energy collection systems, including all substations, switch yards and interconnects, shall be permitted only if they are determined by the Town to be consistent in size and use with the character of surrounding neighborhood.

(g) Solar energy collection systems shall be permitted only if they are determined by the Town not to present any unreasonable safety risks, including, but not limited to:

- [1] Weight load;
- [2] Wind resistance; and
- [3] Ingress or egress in the event of fire or other emergency.

(h) All solar energy collection systems described in this Chapter shall meet and comply with all relevant and applicable provisions of the New York State Uniform Fire Prevention and Building Code Standards and applicable electrical codes. To the extent the provisions of the New York State Uniform Fire Prevention and Building Code and applicable electrical codes are more restrictive than the provisions set forth in this Article, the provisions of the New York State Uniform Fire Prevention and Building Code and applicable electrical codes shall control and the provisions contained herein shall be deemed to be installation guidelines only.

(i) All utility services and electrical wiring/lines shall be placed underground and otherwise be placed within the walls or unobtrusive conduit. Conduits or feeds which are laid on the roof shall be camouflaged to blend in with the roof to reduce aesthetically objectionable impacts. Feeds to the inverter shall run within the building and penetrate the roof at the solar panel location.

(j) If a solar energy collection system ceases to perform its originally intended function for more than 12 consecutive months, the solar energy collection system shall be deemed abandoned and the property owner shall notify the Town of Coxsackie Code Enforcement Officer of the system's abandonment. Upon abandonment, the property owner shall completely remove the System, mount and all other associated equipment and components by no later than 90 days after the end of the 12-month period or within

30 days of written notice from the Town. The Building Inspector, Code Enforcement Officer and/or Town Engineer shall have the right, at any reasonable time, to enter, in the company of the owner or his agent, to ensure that the solar energy collection system remains operational.

(k) Solar energy systems and their components shall be accessible by emergency services vehicles and personnel.

(l) To the extent practicable, solar energy collection systems shall have neutral paint colors, materials and textures to achieve visual harmony with the surrounding area.

(m) The design, construction, operation and maintenance of the solar energy system shall prevent the direction, misdirection and/or reflection of solar rays onto neighboring properties, public roads, public parks and public buildings.

(n) Marking of equipment.

(1) solar energy collection systems and components shall be marked in order to provide emergency responders with appropriate warning and guidance with respect to isolating the solar electric system. Materials used for marking shall be weather resistant. For residential applications, the marking may be placed within the main service disconnect. If the main service disconnect is operable with the service panel closed, then the marking should be placed on the outside cover.

(2) In the event any of the standards in this Section for markings are more stringent than applicable provisions of the New York State Uniform Fire Prevention and Building Code, they shall be deemed to be guidelines only and the standards of the State Code shall apply.

(o) If solar storage batteries are included, they must be placed in a secure container or enclosure meeting the requirements of the New York State Building Code when in use. When they are no longer in use, they shall be removed and either recycled or disposed of in accordance with the laws of New York State Fire Prevention and Building Code and local laws of the Town of Coxsackie and any other applicable laws or regulations.

(p) In order to ensure firefighter and other emergency responder safety, there shall be a minimum perimeter area, not covered by any solar equipment, of 36 inches around the edge of the roof and adjacent to transitions, which include vertical walls, dormers, valleys, chimneys, vents and other protrusions, irregularities, or changes in contour to provide space on the roof for walking around all solar collectors and panels. For ground

mounted units, there shall be a minimum horizontal clearance of 48 inches between array rows.

§6. Regulation and approval standards for utility-scale solar collector systems.

A. Purpose and intent.

The purpose of these regulations is to provide utility-scale solar collector systems through performance criteria that balance the unique characteristics of each site. In regulating utility scale collector systems, the Town has considered the compatibility of utility scale solar collector systems with the Town's comprehensive plan and the character and aesthetic qualities of the community. The Town has also considered, the long term effects of these systems on property values and property use, the visual impact on the community, the need to preserve open space and limited farmland as these systems remove large tracts of land from service considering the long term nature of the use and the process of decommissioning and the difficulty of restoring the land to an alternative use after decommissioning.

B. Applicability.

(1) Utility scale solar collector systems shall be a permitted use in the Commercial (C) District and the Industrial (I) District in the Town of Coxsackie, subject to the issuance of a special use permit and site plan approval by the Planning Board and the other requirements as set forth herein.

(2) Except as stated in Subparagraph (B)(1) of this Section, utility scale solar collection systems shall be prohibited in all other zoning districts within the Town.

(3) Property utilized for utility scale solar collection systems shall have a single principal use which shall be solar collectors and appurtenances.

(4) In any instances where specific permitted uses, area, or height standards, development guidelines and/or review procedures specifically set forth in this section conflict with any other general provision or requirements of the Zoning chapter, the particular provisions set forth herein shall take precedence and control.

(5) A utility scale solar collector system may occupy up to 20% percent of the area of the Solar Lot. The lot coverage shall be deemed to include all land under or between any system components within the general perimeter of the system as a whole, but shall not include the area within the buffer between the system components and the surrounding security fencing. The Planning Board may waive the maximum lot coverage area of 20% up to a maximum of 50% percent of the area of the Solar Lot if the project sponsor can show that increasing the lot coverage will actually result in less environmental or visual impacts. The determination as to

whether a waiver is justified lies solely in the Planning Board.

(6) Utility Scale Solar Collector Systems shall not be considered a public utility as defined in §201-91 of the Town Code.

C. Permitting.

(1) Special Use Permit Required. No utility-scale solar energy collection system shall be permitted except upon obtaining a special use permit in accordance with the procedure and standards for special use permits set out in ARTICLE XI of the Town of Coxsackie Zoning Law. In addition to such standards, issuance of a special use permit shall be contingent upon site plan review and satisfaction of Standards set forth hereafter in this chapter.

(2) Site Plan Review Required. Every application for a utility-scale solar energy collection system shall be subject to site plan review and approval, in accordance with Article X of this Zoning Law regardless of whether the proposed utility-scale solar energy collection system exceeds any threshold for site plan review which is otherwise stated in such chapter. In conducting site plan review for a utility-scale solar energy system, the Planning Board may waive submissions that, in the Planning Board's judgment, are inapplicable or are not relevant to the review of the proposed solar system.

(3) All applications for site plan and special use permit review for utility-scale solar energy collection systems shall include the following:

(a) Plans and drawings of the utility-scale solar energy system installation signed by a professional engineer registered in New York State showing the proposed layout of the entire utility-scale solar energy system along with a description of all components, whether on site or off site, existing vegetation and proposed clearing and grading of all sites involved. Clearing and/or grading activities are subject to review by the Planning Board and shall not commence until the issuance of site plan approval, and the special use permit.

(b) Plan for clearing and/or grading of the site.

(c) An electrical diagram detailing the utility-scale solar energy system installation, associated components and electrical interconnection methods, with all disconnects and over-current devices identified.

(d) Access. The applicant shall indicate on a site plan all existing and proposed access to the site, including road, electric power, emergency access, land-based telephone line connection, and other utilities existing and proposed within the property boundaries of the proposed location. Existing roadways shall be used for access to the

site whenever possible and determined acceptable by the Planning Board through site plan review.

(e) A storm water pollution prevention plan per New York State Department of Environmental Conservation requirements to detail storm water runoff management and erosion control plans for the site.

(f) Photo simulations shall be included showing the proposed utility-scale solar energy system in relation to the building/site along the elevation views and dimensions and manufacturer's specs and photos of the proposed utility-scale solar energy system, solar collectors and all other components.

(g) Noise. Details of the proposed noise that may be generated by inverter fans. The Planning Board shall require a noise analysis to determine potential adverse noise impacts. Noise-producing equipment shall be sited and/or insulated to minimize noise impacts on adjacent properties as approved by the Planning Board during site plan review.

(h) Statement co-signed by the applicant and the landowner 1) that the establishment of the proposed utility-scale solar energy system shall not result in a tax penalty, pursuant to Section 305 or 306 of the New York State Agriculture and Markets Law, due to the conversion of land to a non-agricultural use, which shall also states the last year, if any, for which the subject lands received an agricultural real property tax exemption, or 2) that the establishment of the proposed utility-scale solar energy system may result in a tax penalty, pursuant to Section 305 or 306 of the New York State Agriculture & Markets Law, along with a statement indicating the most recent year, if any, for which the subject lands received an agricultural real property tax exemption, which shall also include a statement of the number of acres to be converted from an agricultural to a non-agricultural use and an estimate of the total amount of tax penalty to be imposed, including interest. In the case of an application for a utility-scale solar collector system to be located on private lands owned by a party other than the applicant a copy of the lease agreement with the property owner shall be filed with the Building Department.

(i) Part I of the Full Environmental Assessment Form (FEAF) filled out.

(j) Identification. Identification and contact information of the responsible party to be notified in the event of emergency or for any other reason, including the address for notices of the utility-scale solar energy system owner/operator or designed party to receive notice in the event of decommissioning and removal of the energy system. If the party to receive notices or the address thereof changes at any time, the applicant is required to notify the Town Clerk, in writing of such change. This shall be a condition of

any permit issued.

(k) Costs. The Town of Coxsackie shall require any applicant to pay all associated costs for any application review, including but not limited to, engineering, legal, environmental, planning and the review required under this Local Law or under SEQRA. When the Planning Board or Zoning Board of Appeals determines that a review is anticipated to require engineering, legal, environmental or planning costs, they shall provide an estimate to the applicant. Subsequently, funds adequate to cover such estimated costs shall be placed into escrow by the applicant prior to commencement of any further Planning Board or Zoning Board of Appeals review, and shall be replenished or increased at the direction of either of such boards.

(l) Proof of insurance. The applicant and the owners of the property where the utility-scale solar collector system is to be located shall file with the Building Department proof of insurance in a sufficient dollar amount to cover potential personal and property damage associated with construction and operation thereof as determined by the Planning Board.

(m) Utilities. The applicant shall provide written confirmation that the electric grid has the capacity to support the energy generated from the utility-solar collector system.

(n) Plan for post construction maintenance of grounds and structures and town roadways.

(o) Decommissioning plan.

4. General Provisions on Site Plan Review. In addition to the requirements and standards set out elsewhere in the Zoning Law of the Town of Coxsackie, every site plan review of a utility-scale solar energy collection system shall include a public hearing and site plan approval shall be subject to conformance to the following:

(a) All utility-scale solar energy systems shall adhere to all applicable Town of Coxsackie building, plumbing, electrical and fire codes.

(b) There shall be a minimum 100 foot buffer between any component of the utility-scale solar energy system and each Solar Lot boundary line. The Planning Board is authorized to increase the width of this buffer, in its discretion, after analysis of site conditions and adjacent land uses.

(c) No component of any utility-scale solar energy system may be located within one hundred and fifty (150) feet of any roadway, other than a private service road used

solely for access to the site of such energy system.

(d) Security provisions. Each site shall have an eight-foot security fence to prevent unauthorized access and vandalism to the utility-scale solar collectors and a security program for the site as approved by the Planning Board during site plan review. The height of the security fence may be adjusted by the Planning Board considering visual impact upon neighboring properties.

(e) There shall be created and maintained within the security fence, and between such fence and the components, structures, or fixtures of the solar energy system, a clear and unobstructed buffer area at least twenty-five (25) feet in width encircling the entire perimeter of the facility, with a surface and grade suitable for the safe passage of fire trucks and other emergency vehicles.

(f) Lands which have the highest ecological values as evidenced by large, contiguous areas of forest, undisturbed drainage areas, wetlands or NYS DEC identified critical habitats or rare plant and animal populations shall be avoided.

(g) Development and operation of the system shall not have a significant adverse impact on fish, wildlife or plant species or their critical habitats or other significant habitats identified by the Town of Cossackie or other federal or state regulatory agencies.

(h) Previously cleared or disturbed areas are preferred locations for solar panel arrays. The clearing of additional lands to accommodate a proposed utility-scale solar energy system may be permitted, provided the percentage of newly cleared land on any Solar Lot does not exceed 10% of the existing woodlands on that Solar Lot.

(i) Arrays shall be located on a Solar Lot in such a manner as to avoid, to the maximum extent feasible, soils classified as prime farmland by the U.S. Department of Agriculture, New York State or the Natural Resources Conservation Service.

(j) Native grasses and native vegetation, preferably pollinator friendly, shall be maintained below the arrays.

(k) Visual. Utility-scale solar collector systems shall be sited in a manner to have the least possible practical visual effect on the environment. The landscaping plan shall include visual assessment report, including appropriate modeling and simulations and photography assessing the visibility from key viewpoints including existing tree lines, surrounding topography, and proposed elevations shall be required.

(l) Landscaping, screening and/or earth berming shall be provided to minimize the potential visual impacts associated with the utility-scale solar collector systems and

its accessory buildings, structures and/or equipment. Additional landscaping, screening and/or earth berming may be required by the Town Board and/or the Planning Board to mitigate visual and aesthetic impacts.

(m) Any associated structure shall be screened, placed underground, depressed, earth bermed or sited below a higher topographic grade or the ridge line to the greatest extent feasible, particularly in areas of high visibility.

(n) The utility-scale solar energy collection system, including any associated fencing or proposed off-site infrastructure, shall be located and screened in such a way as to avoid or minimize visual impacts as viewed from:

- [1] Publicly dedicated parks, roads and highways;
- [2] Existing residential dwellings located on contiguous parcels;

(o) Glare and heat. No unreasonable glare or heat shall be produced that is perceptible beyond the boundaries of the lot on which such use is situated. The design, construction, operation and maintenance of any utility-scale solar energy system shall prevent the misdirection and/or reflection of solar rays onto neighboring properties, public roads and public parks in excess of that which already exists.

(p) All structures and devices used to support solar collectors shall be nonreflective and/or painted a subtle or earth-tone color to aid in blending the facility into the existing environment.

(q) All transmission lines and wiring associated with a utility-scale solar energy system, including phone, shall be buried and include necessary encasements in accordance with the National Electric Code and Town of Coxsackie requirements. The applicant is required to show the locations of all proposed electric utility lines, including substations and junction boxes and other electrical components for the project on the site plan. All transmission lines and electrical wiring shall be in compliance with the utility company's requirements for interconnection.

(r) Lighting. A lighting plan shall be required. No utility-scale solar collector system shall be artificially lighted unless otherwise required by federal, state or local law. Exterior lighting may be provided for associated accessory structures and access entrances as may be determined appropriate for security or emergency services purposes only.

(s) Any signage used to advertise the utility-scale solar energy system shall be in accordance with the Town of Coxsackie's signage regulations. The manufacturers or installer's identification and appropriate warning signage shall be posted at the site and

clearly visible.

(t) The height of the solar panel arrays shall not exceed fifteen (15') feet and no part of any system structure or equipment shall exceed fifteen (15') feet in height, when oriented at maximum height.

(u) Following construction of a utility-scale ground-mounted solar energy system, all disturbed areas where soil has been exposed shall be re-seeded with native grass and/or planted with low-level native vegetation capable of preventing soil erosion and airborne dust.

(v) The applicant will be required to enter into a road maintenance agreement with the Town in the event Town roads are utilized during the construction or installation of the system. At the applicant's expense, an engineer shall determine the baseline condition of the Town roads prior to commencement of installation and the condition at the end of construction. The Town intends that the applicant shall be responsible for town road restoration in the event the road condition is less than the baseline condition established for the road affected.

D. Requirements after approvals.

(1) Any post-construction changes or alterations to the utility-scale solar energy system shall be done by amendment to the special use permit and site plan review and approval, with public hearing and subject to the requirements of this article.

(2) After completion of a utility-scale solar energy system, the applicant shall provide a post-construction certification from a professional engineer registered in New York State that the project complies with applicable codes and industry practices and has been constructed and is operating according to the approved plans. The applicant shall further provide certification from the utility that the facility has been inspected and connected.

(3) After completion the applicant shall restore the Town roads, as required under the road maintenance agreement, to the condition prior to construction.

(4) Documentation from the utility company, verifying that the utility-scale solar collector system is active, shall be provided annually to the Town of Coxsackie Building Department.

(5) Maintenance of the site and in particular the landscaping, berming and fencing in accordance with the post-construction maintenance agreement.

E. Required sureties/insurance for construction, maintenance and removal of utility-scaled solar

collector systems and Indemnification.

(1) Construction and maintenance. Prior to the issuance of a special use permit for the utility-scale solar collector system and any associated accessory structures, the applicant shall post a financial security in an amount and form acceptable to the Town for the purposes of construction and maintenance. The amount shall be up to 50% of the construction value. Acceptable forms shall include, in order of preference: cash; letter of credit; or a bond that cannot expire; or a combination thereof. Such financial security will be used to guarantee compliance with the conditions of the approval for the utility-scale solar collector. If the owner of the site fails to comply with any conditions of the approval during construction or as part of the long-term maintenance of the site, all costs of the Town incurred to comply with conditions of the approval shall be paid using the financial security provided by the applicant. Failure to comply with the conditions of the approval or to maintain an acceptable level of financial security will result in revocation of the special use permit and/or certificate of occupancy.

(2) Indemnification. The applicant, owner, and operator of the utility-scale solar energy collection system shall release and hold harmless the Town of Coxsackie and all of its officers, officials, employees, appointees, agents, and servants from and against any and all liability and responsibility for any and all accidents, injuries and/or damages of any kind to persons (including death) or property arising out of the installation, construction, operation, maintenance, repair or removal of such system. The applicant, owner and operator shall indemnify and hold harmless the Town of Coxsackie and its officers, officials, employees, appointees, agents and servants from any and all claims, suits, actions, damages, awards, judgments and costs of every nature, including reasonable attorneys' fees, arising out of the installation, construction, operation, maintenance, repair or removal of such system.

(3) Insurance. The operator of a utility-scale solar energy collection system shall obtain and maintain insurance, issued by an insurer authorized to do business in New York State, to the specifications and in an amount approved by the Planning Board. Such insurance shall name the Town of Coxsackie as an additional insured party. The certificate of insurance shall contain a provision that coverage afforded under the applicable policy shall not be cancelled or terminated until at least 30 days' prior notice has been provided to the Town. In the event of a termination, cancellation, or lapse of the required insurance coverage, the special use permit to operate the energy system shall be immediately suspended and operation of the system shall cease. Upon restoration of the required insurance coverage, to the satisfaction of the Town, permission to operate may be restored.

F. Abandonment or decommissioning of Utility-Scale Solar Energy Systems.

(1) To ensure the proper removal of utility-scale energy systems, a decommissioning plan shall be submitted as part of the special use application. Compliance with this plan, shall be made a condition of the issuance of a special use permit under this section. The

decommissioning plan applies to the applicant and to any subsequent owner or operator of the subject parcel or solar energy facility or their successors. A cost estimate detailing the projected cost of executing the decommissioning plan shall be prepared by a professional engineer or contractor. Cost estimates shall take into account inflation. Removal of utility-scale solar energy systems must be completed in accordance with the decommissioning plan.

(2) A utility-scale solar energy system which has been inactive for a period of one year shall be decommissioned and removed at the owner/landowner, applicant or operator's expense, and the site remediated within 120 days. This obligation shall be binding upon applicant's, owner's, landowner's and/or operator's successors and/or assigns. Upon such failure to either maintain operation or decommission the system as provided for herein, the special use permit and/or certificate of occupancy issued in relation to such system or facility shall terminate. Decommissioning and remediation shall include removal of the energy system and all its components, associated structures, fixtures, equipment, fencing and other improvements, including any subsurface wires, footings or other elements from the parcel. Any access roads created for building or maintaining the system shall also be removed and re-planted with vegetation. The site terrain shall be restored and regraded, if necessary to a condition generally comparable to its original condition and re-planted with native vegetation.

(3) All safety hazards created by the installation and operation of the utility-scale solar energy system shall be eliminated and the site remediated within six months of the removal of the utility-scale solar energy system.

(4) Prior to the issuance of any permits, the Planning Board will require the applicant to submit a performance/removal bond or other financial security, as directed by and satisfactory to the Planning Board, upon advice of the Town's attorney, engineer or other professional experts, based upon the decommissioning cost estimate in an amount satisfactory to the Town of Coxsackie, to ensure the removal of the system, its components and associated structures, fixtures, equipment, fencing or other improvements and the remediation of the site the bond or financial security shall not expire. Such financial security will be used to guarantee removal of the utility-scale solar collector system should the system be abandoned. In the event that the utility-scale solar energy system is not removed within one year of becoming inactive or the site is not remediated and restored to a condition approved by the Planning Board, the Town of Coxsackie, by resolution of the Town Board after thirty days' written notice and opportunity of the landowner and system operator to be heard, may cause the same to be removed and the site remediated using the financial security. Notice sent by first class U.S. mail to the property owner, as reflected in the Town real property records, to the mailing address set forth therein, and to the energy system owner/operator, at the address for notice set forth in the application, as may be amended or superseded by written notice to the Town Clerk, shall be sufficient notice. Abandonment shall be assumed by the Town if the annual documentation as required in D (4) above, is not provided by the owner, applicant or lessee for one (1) year. If the owner, applicant or lessee fails to remove any associated structures or restore the site to the condition approved by

the Planning Board, all costs of the Town incurred to comply with this condition shall be paid using the financial security provided by the applicant.

§7. Fees.

The Town Board may set application, review and/or approval fees for solar energy collection systems by resolution, from time to time, as it deems appropriate.

§8. Amendment of Table of Uses (Attachment 1 and 2 and C of Chapter 201).

The Table of Uses set forth in Chapter 201 are hereby amended in accordance with the provisions of this Local Law. In particular, a use entitled “small-scale solar energy collector systems/roof mounted or flush mounted” is added to the Table of Uses as a permitted use in all districts subject to Chapter 167 as revised herein. A use entitled “small-scale solar energy collector systems/ground mounted and free standing with a rated capacity of no greater than 25kW” is added as a special permit use in all districts, except the high density residential-1 (HDR-1) and high density residential -2 (HDR-2) districts, where they are not permitted, subject to Chapter 167 as revised herein. A use entitled “small-scale solar energy collector systems/ground mounted and free standing with a rated capacity of greater than 25kW” is added as a special permit use in all districts, except the High Density Residential-1 (HDR-1), High Density Residential -2 (HDR-2) and Waterfront Residential (WR) districts where they are not permitted, subject to Chapter 167 as revised herein.

A use entitled “utility-scale solar collector systems” is added to the Table of Uses as a special use permit in the Industrial(I) and Commercial (C) districts and as not permitted in all other districts, subject to Chapter 167 as revised herein.

§9. Severability.

If any clause, sentence, paragraph, word, section or part of this Code shall be adjudged by any court of competent jurisdiction to be unconstitutional, illegal or invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, word, section or part thereof, directly involved in the controversy in which said judgment shall have been rendered.

§10. Effective Date.

This Local Law shall become effective immediately upon its filing in the Office of the Secretary of State in accordance with Section 27 of the Municipal Home Rule Law.

November 30, 2018

Via Electronic Filing

Hon. Kathleen H. Burgess, Secretary
New York State Board on Electric Generation Siting and the Environment
3 Empire State Plaza
Albany, New York 12223-1350

RE: Case No. 18-F-0087 Application of Flint Mine Solar LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for Construction of a Solar Electric Generating Facility Located in the Towns of Coxsackie and Athens, Greene County.

Dear Secretary Burgess:

Pursuant to the Notice of Filing of a Preliminary Scoping Statement and Deadline for Submitting Comments issued November 9, 2018, Scenic Hudson, Inc. ("Scenic Hudson") respectfully submits the following comments on the Preliminary Scoping Statement ("PSS") in the above-referenced proceeding.

I. SCENIC HUDSON'S INTEREST

Scenic Hudson is a 501(c)(3) organization based in Poughkeepsie, NY. Scenic Hudson preserves land and farms and creates parks that connect people to the Hudson River, while fighting threats to the river and natural resources that are the foundation of the Hudson Valley's prosperity. We are following this proceeding as well as several others pending before the New York State Board on Electric Generation Siting and the Environment ("Siting Board") for new, large-scale solar energy facilities proposed in the Hudson Valley (specifically, Case Numbers 17-F-0617 (Albany County Solar Facility) and 17-F-0619 (Greene County Solar Facility)).

Scenic Hudson is dedicated to preserving the scenic, ecological, recreational, historic and agricultural treasures of the Hudson River valley. We combine land acquisition, support for agriculture, citizen-based advocacy and sophisticated planning tools to create environmentally healthy communities, champion smart economic growth, open up riverfronts to the public and preserve the valley's inspiring beauty and natural resources. A crusader for the valley since 1963,

today we are the largest environmental group focused on the Hudson River and its valley. We have over 25,000 supporters, the majority of which reside in the Hudson Valley region, including in Greene County.

The Scenic Hudson Land Trust, Inc. (SHLT) is an affiliate of Scenic Hudson, Inc. that owns lands throughout the Hudson Valley in fee and by conservation easement that exhibit the open space and agricultural values that Scenic Hudson is dedicated to preserving. Scenic Hudson has protected over 40,000 acres in nine counties and created or enhanced many parks and preserves for public enjoyment, including in Greene County.

New York State policy mandating an increase in the amount of renewable energy supply from 25% to 50% of the state's total by the year 2030 is driving proposals for new, large-scale solar facilities in the Hudson Valley. New York has adopted important policies to transition the state to a 50% renewable energy supply, reduce fossil fuel emissions and mitigate climate change. Scenic Hudson strongly supports these initiatives. We seek to ensure that the development of solar energy projects in the Hudson Valley is maximized, while protecting the region's priceless natural resources, scenic views and historic sites. It is Scenic Hudson's view that we can fight climate change by helping make the Hudson Valley a leader in clean energy. This can create new jobs, provide reliable and affordable energy, and shape healthier, stronger communities.

Scenic Hudson is focused on promoting the development of solar projects in the Hudson Valley, while simultaneously preserving important natural and economic resources. We have published a guide to siting renewable projects in the Hudson Valley, *Clean Energy, Green Communities*, which was developed to help overcome challenges presented by large-scale solar projects such as this, available on-line at: www.scenichudson.org/renewables.

Clean Energy, Green Communities contains several siting and design principles for renewable energy development to help stakeholders find common ground in a regional model for increased renewable energy development that also protects natural and economic resources:

- prioritize development on previously disturbed areas;
- protect agricultural lands and promote co-location;
- protect natural beauty;
- protect ecological resources;
- protect historic and cultural resources;

- maintain the purpose of conserved lands;
- avoid and minimize new transmission and distribution lines;
- use construction and operation best practices; and
- promote sustainable renewable energy development through planning and zoning.

Under these principles, areas with high conservation, agricultural, ecological and cultural value should be avoided for development. Instead, low-conflict sites and areas should be identified and prioritized for use. Projects can be sited and designed to minimize impacts to areas of natural beauty by avoiding designated scenic areas, keeping below tree lines and including robust vegetative screening. Opportunities should be pursued to achieve dual-use, or co-location, of solar energy projects and other uses, such as pollinator-friendly plantings, livestock grazing or crops. In this way, the benefits of renewable energy can be achieved without compromising conservation values.

In Greene County, where the Facility is proposed to be located, Scenic Hudson has played a vital role in securing New York Department of Environmental Conservation Wildlife Management Areas (Vosburgh Swamp MUA in Coxsackie and Athens and The Great Vly MUA in Catskill) along with the Brandow Point Multiple Use Area. Scenic Hudson has also established multiple parks and preserves in Greene County, which provide public access to the significant and important natural resources these areas provide. These places include the Ramshorn-Livingston Sanctuary in Catskill, Long View Park in New Baltimore, and Four Mile Point Preserve, which is located in Coxsackie. Most recently, together with the Greene Land Trust, Scenic Hudson opened Mawignack Preserve in the Town of Catskill, a 144-acre property at the confluence of the Catskill and Kaaterskill Creeks, which will provide recreational opportunities and help with flood control. All told, Scenic Hudson holds, in fee or conservation easement, just over 290 acres of land in Coxsackie, and almost 1,700 acres in Greene County. Therefore, Scenic Hudson itself will potentially be affected by the proposed solar electric generation facility, as will its conservation mission in the Hudson Valley.

II. ARTICLE 10 AND THE PRELIMINARY SCOPING STATEMENT

The Preliminary Scoping Statement (PSS) stage is vitally important to the Public Service Law (PSL) Article 10 review process because it is the public's first significant opportunity to learn about and respond on the record to the potential benefits and impacts of a proposed project, the proposed studies that will be conducted in order to evaluate those potential impacts, measures

proposed to minimize environmental impacts or mitigate unavoidable impacts; and the reasonable alternatives to a project.¹

The PSS must include “as much information as is reasonably available concerning the proposed facility, generally in the form (though in less detail) than it will appear in the application” and must address, among other things, “the extent and quality of information needed for the application to adequately address and evaluate each potentially significant adverse environmental and health impact...”² The PSS serves as the scope for the application itself as well as the basis for any stipulations, or agreements, between the applicant and stakeholders on the scope and methodology of the studies to be conducted for the formal application.

Based upon the information in these studies, the Siting Board, through the PSL Article 10 process, is empowered to grant permission for an applicant to construct and operate a major electric generation facility only if it finds, among other things, that:

- it will be a beneficial addition for the electric generation capacity of the state;
- it will serve the public interest;
- “the adverse environmental effects of the construction and operation of the facility will be minimized or avoided to the maximum extent practicable;”
- if there are “significant and adverse disproportionate environmental impacts” from a proposal, that “the applicant will avoid, offset, or minimize the impacts caused by the facility upon the local community for the duration that the certificate is issued to the maximum extent practicable using verifiable measures”; and
- the Facility is designed to operate in compliance with applicable local laws concerning the environment and public health and safety that are not unduly burdensome.³

In making these findings, the Siting Board “shall consider” the state of available technology; alternatives; environmental impacts; impacts of related facilities; consistency with the state energy plan; impacts on community character; and “such additional social, economic, visual, or other aesthetic, environmental and other considerations deemed pertinent”.⁴

¹ NY Public Service Law (“PSL”) § 163(1).

² 16 NYCRR § 1000.5(l).

³ NY Public Service Law (“PSL”) § 163(3).

⁴ PSL § 168(4).

III. THE PROPOSED FLINT MINE SOLAR FACILITY

Flint Mine Solar is a proposed photovoltaic (PV) solar energy generating facility, to be located in the Towns of Coxsackie and Athens in Greene County, which would generate up to 100 megawatts (MW) of electricity (the Facility).⁵ According to the Flint Mine PSS, the lands under evaluation to host the Facility (the “Facility Site”) are comprised of 1,700 acres of “mostly abandoned agricultural fields, shrubland, and forestland, which would ultimately be purchased (or leased) by the Applicant prior to constructing the facility.”⁶ Up to 600 acres of this Facility Site will be developed with photovoltaic (PV) modules and other project components, while 1,100 acres would remain undeveloped, “including undisturbed forestland, wetlands, cultural resource areas, and open space/grassland habitat (which would be preserved as grassland habitat for sensitive wildlife and flora species).”⁷

The components of the Facility will include multiple arrays of PV modules on either fixed-tilt or single-axis tracking structures, inverters, transformers, conductors and junction boxes, a substation, a switchyard, connection lines and internal infrastructure such as access driveways, stormwater management controls, fencing and signs.⁸ The PSS also indicates that the Facility components may include batteries for storage capability within the project.⁹

The proposed Facility site is located on a flat land terrace in eastern Greene County approximately 2 miles to the west of the Hudson River. U.S. Route 9W, County Route 49, Fountain Flats Road, Flats Road, and Flint Mine Road all pass through the Facility Site and multiple residences and current and abandoned farmsteads occur along these routes. In addition, two large utility line Rights-of-Way transect the Facility Site from North to south. A portion of a CSX rail transportation corridor also passes through the eastern portion of the Facility site.¹⁰

IV. COMMENTS ON THE PRELIMINARY SCOPING STATEMENT FOR THE FLINT MINE SOLAR FACILITY

The Flint Mine PSS is organized in accordance with the exhibit structure set forth in the Siting Board’s regulations at 6 NYCRR Part 1001, which dictates the content of an application

⁵ PSS p. 3.

⁶ PSS p. 3.

⁷ PSS p. 3.

⁸ PSS p. 4.

⁹ PSS p. 4.

¹⁰ PSS p. 27.

for a certificate of under Article 10 of the Public Service Law. Rather than follow this outline, these comments are organized according to topic areas of particular concern to Scenic Hudson.

A. The Article 10 Process

The PSS states that “Flint Mine Solar will post notices if and when it intends to proceed to a Stipulations phase for this project.”¹¹

Comment:

- Scenic Hudson encourages the Applicant to engage in a negotiation of stipulations with the parties to the proceeding.

B. Potential Energy, Economic and Environmental Benefits

The PSS states that the Facility will improve energy diversity within the State by increasing the amount of electricity produced by non-fuel dependent solar power, and it will contribute significantly to the State’s clean energy and greenhouse gas emissions reduction goals and that as one of the State’s first utility-scale solar facilities, it will pave the way for future projects of its size.¹²

The PSS also states that the Facility will have positive socioeconomic impacts, including temporary construction employment and on-going employment and contracting service opportunities, as well as “increased revenues to county and local municipality tax bases, purchase of local supplies and goods, and lease revenues to participating landowners.”¹³ According to the PSS, “the Applicant proposes to negotiate a Payment in Lieu of Taxes (PILOT) agreement with the host municipalities and the Cossackie-Athens School District or with the Greene County IDA.”¹⁴

In addition, the PSS states that “as a consequence of the Facility’s relatively low marginal costs of production, in combination with the operation of other low-cost wind and solar plants elsewhere in the NYISO, there will be downward pressure on the market-clearing price of electricity in the ISO’s wholesale market, which will create substantial savings for New York’s ratepayers (analysis done for NYSERDA suggests that this reduction in price could be as much as \$2/MWh).”¹⁵

¹¹ PSS p. 2.

¹² PSS pp.6. 61.

¹³ PSS pp. 6-7.

¹⁴ PSS p. 50.

¹⁵ PSS pp. 50-1.

The PSS states that “overall, the Facility is anticipated to have long-term beneficial effects on the environment as a consequence of reduced fossil fuel use” as well as “significant, long-term beneficial effects on the use and conservation of energy resources.”¹⁶ The Application will also include a discussion of the Facility’s contributions towards addressing the problem of climate change.¹⁷

Comment:

- As referenced above, any decision by the Siting Board to approve the project must include a determination that the project will be a beneficial addition for the electric generation capacity of the state and that it will serve the public interest. To help the public as well as the Siting Board make this determination, the portions of the Application that address the potential benefits of the Facility must include a robust, clear and substantiated discussion and analysis of these potential benefits.

C. Potential Environmental Impacts and Mitigation

1. In General

The PSS acknowledges that “long-term unavoidable impacts associated with operation and maintenance of the Facility are ... anticipated to be limited, but could include solar modules’ visibility, impacts to wildlife habitat, impacts to cultural resources, and impacts to agricultural resources, and impacts to wetlands and streams.”¹⁸

Comment:

- As referenced above, PSL Article 10 requires a finding that the adverse environmental effects of the construction and operation of a proposed facility will be minimized or avoided to the maximum extent practicable, and that if there are “significant and adverse disproportionate environmental impacts” from a proposal, that “the applicant will avoid, offset, or minimize the impacts caused by the facility upon the local community for the duration that the certificate is issued to the maximum extent practicable using verifiable measures.” The preferred alternative for project design and layout selected by the Applicant must ensure

¹⁶ PSS pp. 50, 52.

¹⁷ PSS p. 52.

¹⁸ PSS p. 49.

that the impacts to all of the identified important resources that may be affected, i.e. visual, agricultural and habitat/ecological, are avoided and mitigated with equal consideration.

2. Ecological Resources: Including Plant Communities, Wildlife and Wildlife Habitat, Threatened and Endangered Species, Wetlands and Water Resources

The proposed 100 MW Flint Mine Solar Facility is one of several proposed large-scale solar PV projects in the Hudson Valley currently undergoing the Public Service Law Article 10 review process for major electric generation projects before the Siting Board. Together with the adjacent, 50 MW Greene County Solar Facility proposed by Hecate Energy, over 2,400 acres are under consideration as Facility Areas for large-scale solar PV development within the Grassland Habitat Focus Area as identified in the Greene County Grassland Habitat Management Plan.¹⁹ According to the PSS, lands protected by the Greene County Land Trust occur within the Study Area for the Facility.²⁰ In addition, some lands within the Facility Site occur within a Winter Raptor Concentration Area (WRCA), identified as important winter foraging and roosting ground for multiple raptor species, including the short-eared owl and northern harrier.²¹

The PSS states that Facility components have been sited to minimize impacts to habitat most valuable to sensitive species such as the short-eared owl (*Asio flammeus*) and northern harrier (*Circus hudsonius*). It further states that:

The Applicant intends to preserve and manage significant areas of grassland habitat within undeveloped areas of the Facility Site for the benefit of avian species including the northern harrier and short-eared owl. These areas will include habitat currently identified as valuable to both species, as well as lands succeeding out of grassland that can be restored to high-quality habitat. The Article 10 Application will include a comprehensive land management plan for the entire Facility Site, which will incorporate the findings and recommendations from all ecological studies and consultation conducted in support of the Application.²²

In addition:

Flint Mine Solar proposes not only a 100-MW-AC solar electric generating and battery storage Facility, but also a planned landscape that conserves and manages approximately 200 acres of

¹⁹ <https://www.greenelandtrust.org/images/stories/PDF/GreeneCountyGrasslandPlanFINAL6-20-2014.pdf>

²⁰ PSS, P. 28.

²¹ PSS p. 120.

²² PSS pp. 121-22.

grassland habitat and protects an important cultural resource, the Flint Mine, in perpetuity. Flint Mine Solar is committed to investigating innovative approaches to manage the Facility Site, such as seeding buffer areas with pollinator-friendly and visually appealing plants and flowers, and designating areas of the Facility that can be used to study the potential for symbiotic use of a solar facility by wildlife species, such as raptors and the small mammals they rely on for winter foraging opportunities.²³

On November 8, 2018, the Applicant held an Open House where it presented a series of maps demonstrating the siting considerations undertaken thus far for the Facility, as well as “Potential Grassland Habitat Management Areas” within the Northern, Eastern, and Western Areas of the Facility Site, and again stated a commitment to this opportunity to “guarantee the success” of important grassland habitat and paying for the entire 1,700 acre Facility Site.²⁴

Comments:

- The PSS includes a description of several types of Plant Communities found within the Facility Site, but does not define the term “grasslands.” The term “grasslands” should be defined and clearly related to the habitat types that are identified.
- The value of the grassland bird habitat at the Facility Site should be contextualized within the larger Cocksackie Flats (Greene County Grasslands) area.
- The PSS references raptor survey data collected by the New York State Department of Environmental Conservation (NYSDEC) for the last 10 years, and also indicates that the Applicant has supplemented this data with its own winter raptor surveys targeting short-eared owls and northern harriers from early January to early April, 2018 as well as a detailed analysis of potential habitat and habitat quality for these species within the Facility Site, which will be combined and summarized into reports provided and discussed within the Application.²⁵ In order for Scenic Hudson and other intervenors in this proceeding to be able to fully participate in a negotiation of stipulations as well as evaluate the Potential

²³ PSS p. 59.

²⁴ See Flint Mine Solar November 2018 Open House Presentation, <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-F-0087&submit=Search>.

²⁵ PSS p. 121.

Grassland Habitat Management Areas that the Applicant has proposed, we request that both the NYSDEC and the Applicant's survey data be made available to intervenors, subject to any required non-disclosure agreement, as soon as possible.

- Scenic Hudson is pleased with the Applicant's commitment to conserving grassland habitat. The proposed "Potential Grassland Habitat Management Areas" as presented by the Applicant at the November 8, 2018 Open House should be analyzed for compliance with the recommendations contained in the Greene County Grassland Habitat Management Plan for size, location, conservation value, and other metrics. The proposed conservation areas should be fully evaluated for their effectiveness in achieving the desired outcomes of grassland bird and raptor habitat retention. In addition, information on the funding structure for both the establishment and maintenance of the habitat management areas (the referenced "comprehensive land management plan") should be provided to the public as soon as possible.
- The Application should include provisions for pre- and post- construction monitoring of the Facility's impacts and/or benefits to grassland birds, water quality, and agricultural resources to help inform future projects, since as noted by the PSS, as one of the State's first utility-scale solar facilities, it will pave the way for future projects of its size, as well as the Applicant's commitment to "designating areas of the Facility that can be used to study the potential for symbiotic use of a solar facility by wildlife species, such as raptors and the small mammals they rely on for winter foraging opportunities."
- With regard to surface waters, the Application should include a flood standard for which any new culverts or bridges will be designed.
- Forested habitats should be surveyed for roosting Northern long-eared and Indiana bats (or at least the presence of potential roost trees), and if the species are found to be using any of the forested areas the applicant should provide an alternative to winter tree removal in order to mitigate indirect impacts to the species via habitat destruction.
- The carbon sequestration value of any cleared forest should be determined, and compared to the emissions reduction benefits of the Facility.

3. Agricultural Resources

According to the PSS, the Facility Site “consists largely of abandoned Agricultural land, although a minority of the land planned for PV modules has been farmed in recent years. Approximately 16% (274 acres) of the land within the Facility Site is actively farmed for hay or other crops, while approximately 35% (604 acres) consists of abandoned agricultural fields.”²⁶

Further:

The Facility will be located on sub-prime, mostly post-agricultural land that is not currently used by the landowners for profitable production of agricultural products. Of the approximately 260 acres of land that might be considered still to be actively farmed, 100 acres of former crop land was not planted in 2017 or harvested in 2018; 100 acres of hayfield wasn’t reseeded or fertilized in 2017 and only a small percentage was cut in 2018 (two years of bales remain unsold in the field) and the wet weather in 2018 severely curtailed the production of hay in another 40 acres (whose owner says costs as much to maintain as it produces). The remaining 20 acres produced hay for the landowner’s domestic consumption and for mulch, as the market for hay has been poor over recent years.²⁷

The PSS states that the Application will include “a discussion of the current agricultural use and productivity of farmlands within the Facility Site as informed by local farmers and landowners, and the County Soil and Water District. The Application will identify those agricultural lands which are used for row crops, regularly or in rotation, as well as agricultural lands used for pasture, hay, or other purposes.”²⁸

In addition:

With respect to agriculture, the Application will include a discussion of current trends (over the last 20 years) in land use changes, with specific focus on factors contributing to the conversion of farmland within a 2-mile radius of the Facility, and potential cumulative impacts of such conversion, as well as the types of land uses driving those conversions (e.g., renewable energy, suburban housing developments, commercial development, etc.). The Applicant will discuss the Facility’s potential effect on agricultural viability of lands within this study area, including the availability of farmland for existing farm operations, the potential increase in rental rates of farmland, and the potential increase in

²⁶ PSS p. 27. Elsewhere, the PSS states that “only approximately 5% of the Facility Site is currently used for agricultural production.” PSS p. 124. This should be clarified.

²⁷ PSS pp. 45-6.

²⁸ PSS p. 111.

the price of farmland. The Applicant intends to conduct interviews with landowners/farm operators within the Facility Site and review readily available historical data on trends in farmland use and acreage in Greene County. The Application will also describe measures during both construction and operation of the Facility that will be implemented to avoid and minimize impacts to on-site soils and adjacent agricultural uses.²⁹

Finally, per the PSS, Exhibit 22 of the Application will contain an evaluation of impacts on agricultural resources including “a quantification and analysis of temporary and permanent impacts to agricultural land based on the proposed footprint of all Facility components and associated limits of disturbance during construction.”³⁰

Comments:

- Since the Applicant is proposing to purchase and to establish a comprehensive land management plan for the entire 1,700 acre Facility Site, the evaluation of potential impacts to agricultural resources should be for the entire Facility Site, not only the footprint of Facility components and construction disturbance limits.
- The aerial photographs used to support the discussion of the current agricultural use of the Facility Site should be the most recent possible. The Applicant should check the state’s orthoimagery program for useable imagery and/or provide recent imagery captured by drone. In addition, the assertion that the project will only impact “sub-prime” agricultural land must be demonstrated with the inclusion of agricultural soils maps that delineate all prime and “prime if drained” soils, and soils of statewide significance.
- We encourage the Applicant to pursue ways to co-locate agricultural uses such as grazing and/or crops with energy production, and use pollinator-friendly plants in and among the arrays as discussed in the PSS.

²⁹ PSS p.28. This conflicts with the statement on p. 136 of the PSS that “As described in Stipulation 4, the Applicant will also include a discussion of historical trends in land use (with a specific focus on conversion of farmland) over the last 20 years within a 5 mile radius of the Facility. This will include a discussion of the Facility’s potential effect on the availability of farmland within five miles.” This discrepancy should be corrected and the reference to a Stipulation should be removed.

³⁰ PSS p. 136.

4. Visual Resources

According to the PSS, based on preliminary viewshed analysis by the Applicant, specific locations within the Facility Area were removed from consideration for PV module development due to their visibility.³¹ The PSS further states:

After construction, the presence of the solar arrays will not result in a significant change to the observable environment. Due to the strategic positioning of the arrays, the presence of natural screening from the north-south ridges, woods and thick rows of trees and the planting of natural screening measures where feasible, the Facility will be generally unnoticeable. Even when it is observable, it is unlikely to be a prominent feature. Evaluation by the Applicant's registered landscape architect indicates that the Facility's overall contrast with the visual/aesthetic character of the area will generally be minimal to nonexistent. However, based on the contrast rating scores, it is possible that the Facility will be observable from certain isolated locations.³²

The PSS indicates that a Visual Impact Analysis (VIA) will be included in the Application in order to "continue to evaluate potential visual impacts that would result from introducing the Facility into the landscape."³³ The PSS states that representative view points for visual simulations "will be selected based upon past and future consultation with, and feedback provided by members of the public, engaged stakeholders, municipal planning representatives, DPS, DEC and OPRHP."³⁴

The PSS indicates that the Application will include a Lighting Plan showing type, location, and height of installation of proposed exterior lighting fixtures for all Facility components, and an indication of the measures to be taken to prevent unnecessary light trespass beyond the Facility property line.³⁵

Comments:

- Scenic Hudson requests status as a stakeholder in the viewpoint selection process for the viewshed analysis and visual simulations to be included in the VIA.
- The Lighting Plan for the Facility should identify a need for Dark Sky lighting, which is important due to the rural nature of the Facility area. Dark Sky lighting,

³¹ PSS p. 148.

³² PSS p. 49.

³³ PSS p. 148.

³⁴ PSS p. 155.

³⁵ PSS p. 67.

including fill cut-off lighting, is lighting recommended by the International Dark Sky Association.³⁶

- There should be a provision in the Application for post-construction evaluation of the visual impacts of the Facility to ensure that the conclusions of the VIA were accurate, using the same rating forms for impacts to visual resources and the degree of visual change as used by the rating panels in the development of the VIA.

5. Cultural Resources

According to the PSS, the Facility Site and surrounding vicinity include numerous archaeological sites associated with Pre-Contact period (from approximately 13,000 years ago to approximately 500 years ago) Native American groups who exploited the abundant exposures of Mount Merino/Normanskill chert present in the local hills and ridges for stone tool production. These groups also made camps on the flats and lower hills and ridges throughout the area. Portions of the Facility Site are located within the Flint Mine Hill Archaeological District, which is listed in the National Register of Historic Places (or, NRHP).³⁷

The PSS states that to minimize potential impacts, the project will incorporate site design and construction elements to minimize the need for soil disturbance, including use of an aboveground electrical collection system.³⁸ The PSS also states that the Applicant has proposed potentially transferring ownership of the portion of the Flint Mine Hill site that is currently owned by the Southold Indian Museum to the ownership of the Archaeological Conservancy as a means to mitigate potential impacts to archaeological resources that could result from soil disturbance during construction of the Facility.³⁹

Comments:

- The Application and the VIA should include an evaluation of the potential visual impacts of an above-ground electric collection system.
- The Application should include details on the proposed land transfer for the Flint Mine Hill site, including the commitments of both the owner and potential owner

³⁶ <https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>

³⁷ PSS p. 95.

³⁸ PSS p. 95.

³⁹ PSS p. 96.

of the property, and a discussion of whether this is considered off-site mitigation for cultural impacts and its potential benefits.

D. Cumulative Impacts Analysis

The PSS states that the Application will describe other proposed land use and/or development within the Study Area (a 2-mile radius). “This will include a discussion of the proposed Hecate Energy Greene County Solar Facility, which is a 50 MW solar project.”⁴⁰ The PSS further states that “a cumulative impact analysis will be conducted to evaluate the expected impacts from the construction, operation and maintenance of the Facility as they relate to other proposed and operating solar energy projects nearby the Facility and in the state, “including the “cumulative impacts of forest and grassland habitat fragmentation, particular potential impacts on listed bird species.”⁴¹

Comments:

- Scenic Hudson commends the Applicant for committing to include a cumulative impacts analysis for the two large-scale solar projects that are proposed to be located adjacent to one another in Greene County. Such an analysis is extremely important for both the public’s and the Siting Board’s understanding of the combined potential impacts of the two large-scale solar projects in terms of their visual impacts and effect on community character, as well as on ecological/habitat, agricultural, cultural, and socioeconomic resources, and how they interact. Such an understanding is critical to any determination that both of these projects should receive approvals pursuant to PSL Article 10.
- In particular, the cumulative impacts analysis should include a discussion of the adjacent Hecate Energy project’s potential impacts on the viability of the grassland habitat preservation areas proposed within the Facility Area.

E. Decommissioning, Site Restoration and Future Land Use

Per the PSS, “utility-scale PV facilities have a life expectancy of 20-40 years. At the end of its useful life, the Facility will be decommissioned, in accordance with a Decommissioning Plan.” The PSS states that “the proposed Facility will result in significant, *temporary* changes to

⁴⁰ PSS p. 28.

⁴¹ PSS p. 130.

land use within the footprint of the project.”⁴² The PSS further states that “the actual impact on existing topsoil in the Facility site will be minor, especially since grading will be avoided wherever possible. As a result, farming operations or other current land uses will again be possible following the Facility’s decommissioning.”⁴³

Comments:

- The Application should include a discussion of compliance with the restoration, monitoring and remediation, and decommissioning requirements for solar energy projects on agricultural lands contained in guidance issued by the New York State Department of Agriculture & Markets.⁴⁴
- The Application should address whether the land use impacts of the Facility will in fact be only “temporary” and the real potential for and feasibility of returning the land to agricultural or other use such as managed grassland after the life of the Facility. Information should be provided on the most likely restoration possibilities.
- The decommissioning cost estimate should include not only decommissioning but restoration costs estimates.
- The Decommissioning Plan should ensure that agreements with private landowners for any leased lands are all consistent and coordinated such that the site will be decommissioned and restored as a whole unit.
- The Decommissioning Plan as well as a restoration plan for the Facility must take into consideration the continuation of any established grassland habitat preservation areas and the proposed comprehensive land management plan for the Facility Site.

F. Alternatives/Impact Avoidance Measures

The PSS and Application are required to include “a description and evaluation of reasonable and available alternative locations for the proposed facility, including a description of the comparative advantages of the proposed and alternative locations, except that a private facility applicant may limit its description and evaluation of alternative location to parcels owned

⁴² PSS p. 29 (emphasis added).

⁴³ PSS p. 19.

⁴⁴ NYSDAM Guidelines for Agricultural Mitigation for Solar Projects (Revision 4/19/2019), available at: https://www.agriculture.ny.gov/ap/agsservices/Solar_Energy_Guidelines.pdf.

by or under option to such private applicant or its affiliates.”⁴⁵ In addition, the Application must contain “a description and evaluation of reasonable alternatives to the proposed facility at the primary proposed location including alternatives regarding general arrangement and design; technology; and scale or magnitude.”⁴⁶

1. Alternative Locations

The PSS states:

For private applicants such as Flint Mine, Article 10 limits the scope of the required alternatives analysis to the identification and description of siting alternatives to sites owned by, or under option to, the applicant or its affiliates. Therefore, the identification and description of reasonable and available siting alternatives to be addressed in the Article 10 Application will be limited to lands owned by or under contract/option to Flint Mine Solar or its affiliates, or to neighboring contiguous parcels that may be suitable for solar and whose owners would be open to leasing or selling to the Applicant, but who may not yet have entered into agreements with the Applicant. Ultimately, the Application will demonstrate that the proposed Facility Site is suitable for utility-scale solar energy generation, and why the selected location best serves the public interest and the environment.⁴⁷

Comments:

- While we recognize that the Applicant only has control over one Facility Site, the alternatives analysis should include a general discussion of potential alternative locations not only under control of the Applicant, but those that could potentially be under its control, in order to provide a full understanding of the Facility’s potential impacts and benefits. The existence of potential project sites that would use previously disturbed lands and/or provide for reduced impacts on agricultural, visual, and other important resources while still meeting the objectives of the Applicant should be explored in the Application. Such an analysis is vital to any determination of the Siting Board that the Facility will serve the public interest.
- The PSS states: “The parties agree that the Application will not include a fully developed evaluation of comparative advantages and disadvantages of alternate

⁴⁵ 16 NYCRR § 1000.5(l)(2)(viii); (x); *see also* § 1001.9(a).

⁴⁶ 16 NYCRR § 1001.9(c).

⁴⁷ PSS p. 46.

locations.” This statement (and others within PSS Section 2.9.2 Proposed Content of the Application) reads like a stipulation agreement, and should be revised.

2. *Alternative Layouts and Site Design*

The PSS states:

The Facility is being designed to avoid or minimize impacts to wetlands, sensitive wildlife habitat, archaeological resources, waterbodies, visibility and visual effects on adjacent areas, and other sensitive resources,” and that “the final design and locations of Facility components will be identified in detail in the Article 10 Application.”⁴⁸

It further states that:

The Applicant has sited the Facility on mainly open, level land in an effort to minimize the need for land clearing and typical construction processes such as surface grading, and soil compaction. The Applicant is also planning to use the least intrusive PV module mounting systems available to minimize soil disturbance, minimize impacts to archaeological resources, and to ensure that land could be restored to agricultural use or other comparable uses following the decommissioning of the Facility.”⁴⁹

In addition, the PSS states that “the consideration and continual refinement of the potential layout and size for the Facility has continued since 2017 The Facility design that will be presented in the Article 10 application will represent the culmination of multiple iterations of refinement to this initial layout in response to the results of regulatory consideration, on-site engineering, and environmental studies.”⁵⁰

Nevertheless, the PSS states:

The Applicant agrees to provide in the Application a discussion of alternative arrangements of Facility components within the Facility Site, including alternative layouts for PV solar modules and their rack/support systems. This discussion will include a comparative assessment of the environmental impacts, including a discussion of vegetative clearing, a discussion and comparison of known, estimated, and expected impacts to wildlife and habitat at all alternative sites and layouts, and the associated impacts under each alternative analyzed. This assessment of alternative layouts will include a discussion of how alternative layouts for the Facility

⁴⁸ PSS p. 3.

⁴⁹ PSS p. 3.

⁵⁰ PSS p. 53.

could help to avoid, minimize, or mitigate environmental impacts from the Project.⁵¹

Comment:

- The section of the Application that addresses alternate Facility designs of scale, interconnection configuration and magnitude should provide a breakdown of the costs and benefits of a range of alternative sizes for the Facility and their corresponding habitat conservation/mitigation benefits (i.e., 100 MW with a 200 acre habitat preserve, 80 megawatts with a 300 acre preserve, etc.)

3. Storage Alternative

The PSS states that the Applicant is considering the use of energy storage devices within the Facility, to improve its ability to delivery [sic] energy precisely when required by consumers and in turn to enhance the economics of the Facility.”⁵² According to the PSS, “pairing energy storage with solar will enable facilities like Flint Mine to capture and store solar energy when it is valued less by the NYISO’s wholesale electricity market, to be dispatched into the system when it is most valuable. This is anticipated to aid in the reduction of demand for less efficient, marginal and polluting “peaker” plants, often very old oil-burning plants in poor urban areas, which do not operate during most of the year, but exist to preserve reliability on summer days with the highest electricity demand.”⁵³

Comment:

- Scenic Hudson encourages the Applicant to include a robust analysis of a project alternative that includes storage in order to determine whether it can help to maximize the potential energy system and environmental benefits of the Facility.

4. Co-Location Alternatives

The PSS states that “any areas where soils disturbance occurs will be planted with a native, pollinator-friendly grass mix.”⁵⁴

⁵¹ PSS p. 57.

⁵² PSS p. 54.

⁵³ PSS p. 61.

⁵⁴ PSS p. 12.

Comment:

- In addition to using pollinator-friendly plantings in and among the solar arrays, the alternatives analysis should study the potential for co-location of solar energy production and agricultural use, such as grazing or appropriate crops.

5. No Action Alternative

The PSS states that the no action alternative would result in the loss of significant grassland habitat through natural successional processes.”⁵⁵

Comment:

- The Application should include a full discussion and analysis of this conclusion.

G. Compliance with Local Laws

The PSS states that “it is the Applicant’s desire to comply with all substantive local laws and ordinances, such that [waiver requests of the Siting Board] are not necessary.”⁵⁶

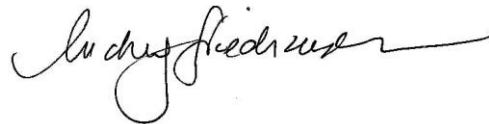
Comment:

- Pursuant to PSL Article 10, the Application must demonstrate that the Facility complies with local laws concerning the environment and public health and safety that are not unduly burdensome.

V. CONCLUSION

Thank you for your attention to these comments on the Preliminary Scoping Statement for the proposed Flint Mine Solar Facility.

Respectfully submitted,



Audrey Friedrichsen, Esq., LL.M.
Scenic Hudson, Inc.

⁵⁵ PSS p. 56.

⁵⁶ PSS p. 178.

From: [Doreen Davis](#)
To: [Matthew Robinson](#)
Cc: [Patrick McCulloch](#); [Elizabeth Izzo](#); [Elliott Fishman](#)
Subject: Re: Flint Mine Solar Facility ID of Visually Sensitive Resources
Date: Monday, April 22, 2019 4:28:52 PM

[EXTERNAL SENDER]

Dear Mr. Robinson,

I am in receipt of your request regarding Visual Impact Assessment as it relates to the Town of Catskill. We compared sites listed on the National Register of Historic Places located in Catskill to the EDR list and found the following sites missing. We don't know enough to say with certainty that these sites are "visually sensitive resources", but they seem to be in the same vein as the other sites you identified.

We provide them for your consideration and included the ID number from the National Register.

1. Eleanor (Sailing Sloop), added 1982--#82001174, off lower Main Street in Catskill Creek
2. Hop-O-Nose Knitting Mill, added 1995--#95000959, 130 W. Main Street, Catskill
3. William Lampman House, added 1995--#95000960, 147 Grandview Ave., Catskill
4. Leeds Flat Site, added 1998--#98001223, Catskill
5. Newkirk Homestead, aka Newkirk-Garcia House, added 1979--#79001584, Sandy Plains Road, Leeds
6. Joseph Hallock House, added 1995--#95000958, 241 W. Main Street, Catskill

Please use this email address for any future correspondence.



Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 1, 2019

Grant Johnson
Cultural Resource Manager
EDR
217 Montgomery Street, Suite 1000
Syracuse, NY 13202
(via email)

Re: ACE/PSC
Flint Mine Solar Project/100MW/600 Acres
Athens and Coxsackie, Greene County
18PR07885 / 18-F-0087

Dear Mr. Johnson:

Thank you for your ongoing consultation with the NYSHPO on behalf of Flint Mine Solar, LLC. We continue to review this undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

Our office has concluded its review of the recently submitted Final Scoping Statement for this undertaking.

Based upon our review of this updated document, we agree that the content of the Cultural Resource section (Exhibit 20) and the Visual Impacts section (Exhibit 24) are appropriate for this activity.

However, we will also request that a glare study be incorporated into the historic resources survey and visual impact evaluation process. We also ask that the site of the former Catskill Mountain House (North-South Lake Park, Haines Falls, NY) be included as a visual receptor.

If I can be of any further assistance, please do not hesitate to contact me at (518) 268-2166 or john.bonafide@parks.ny.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Bonafide".

John A. Bonafide
Director,
Technical Preservation Services Bureau
Agency Historic Preservation Officer

Cc: CRIS Notification List (CRIS via email)

Appendix B:

Photographs



Survey ID: 1

576 & 580 Flint Mine Road
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A two-story vernacular residence
and two barns.

Previous S/NRHP

Determination: N/A

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 2

2924 State Route 385
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A two-and-one-half-story Colonial
Revival residence with a guest
house and several accessory
structures.

Previous S/NRHP

Determination: N/A

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)

Flint Mine Solar

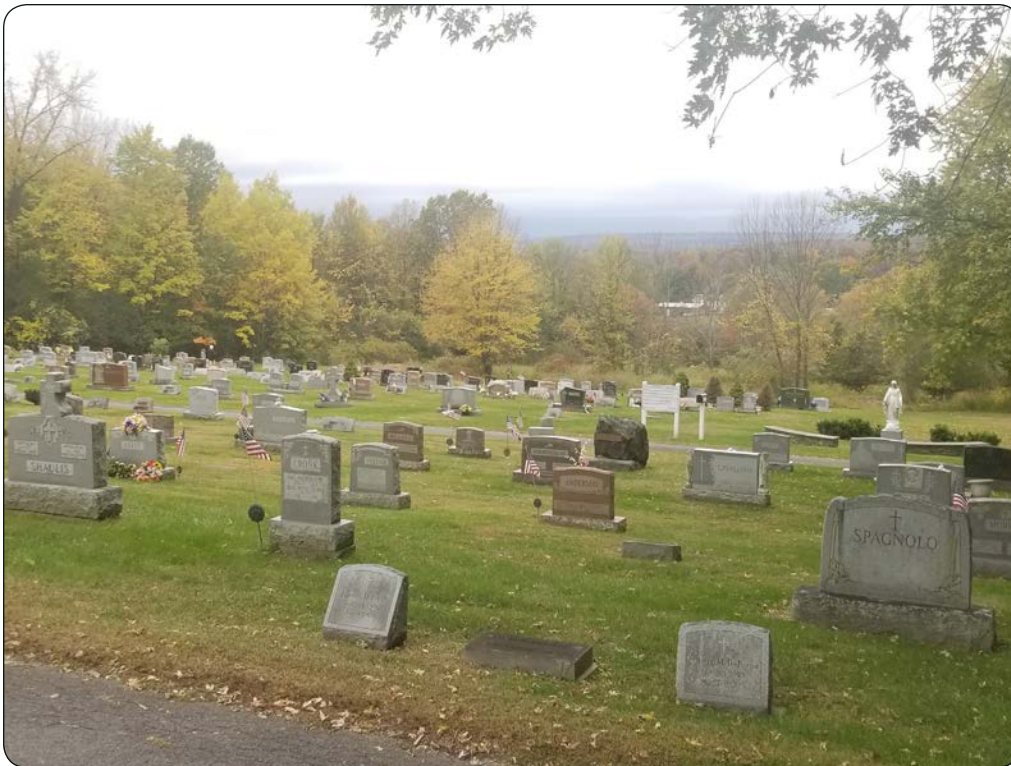
Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

Sheet 1 of 8

**FLINT
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Survey ID: 3

State Route 385
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

An approximately six-acre cemetery with an estimated 1,000 headstones, circa 1874 (St. Mary's Cemetery)

Previous S/NRHP

Determination: S/NRHP
Eligibility Undetermined

EDR S/NRHP

Recommendation:
S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 4

987 County Route 49
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A historic farmstead consisting of a two-story vernacular residence and a barn.

Previous S/NRHP

Determination: N/A

EDR S/NRHP

Recommendation:
S/NRHP-Eligible Resource (EDR
Recommended)

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

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**FLINT
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Survey ID: 5

1199 Flint Mine Road
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A one-and-one-half-story
bungalow.

**Previous S/NRHP
Determination: N/A**

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 6

880 Flint Mine Road
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A historic farmstead consisting of
a one-and-one-half-story Greek
Revival-style residence and two
barns.

**Previous S/NRHP
Determination: N/A**

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

Sheet 3 of 8

**FLINT
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Survey ID: 7

957 Flats Road
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A historic farmstead consisting of a one-and-one-half-story stone residence (shown in photo), a hay barn, a shed, and two silos.

**Previous S/NRHP
Determination:** N/A

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 7

957 Flats Road
Town of Coxsackie, Greene
County

Resource ID: N/A

Name and/or Description:

A historic farmstead consisting of a one-and-one-half-story stone residence, a hay barn (shown in photo), a shed, and two silos.

**Previous S/NRHP
Determination:** N/A

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

Sheet 4 of 8

**FLINT
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Survey ID: 8

Green Lake Road
Town of Athens, Greene
County

Resource ID: N/A

Name and/or Description:

An approximately 2-acre cemetery with an estimated 975 headstones, established circa 1816 (Limestreet Cemetery (also known as Chapell Cemetery, Colleburgh Cemetery).

Previous S/NRHP

Determination: S/NRHP
Eligibility Undetermined

EDR S/NRHP

Recommendation:
S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 9

857 Flats Road
Town of Coxsackie, Greene
County

Resource ID: 03905.000056

Name and/or Description:

Marns Farm, a farm complex with an original Dutch barn.

Previous S/NRHP

Determination: S/NRHP-
Eligible Resource (NYSOPRHP
Determined)

EDR S/NRHP

Recommendation:
Not S/NRHP Eligible (EDR
Recommended)

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

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**FLINT
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Survey ID: 10

275 Flats Road
Town of Athens, Greene
County

Resource ID: 03902.000090

Name and/or Description:

Structure #43, a two-story
modular residence.

Previous S/NRHP

Determination: S/NRHP
Eligibility Undetermined

EDR S/NRHP

Recommendation:
Not S/NRHP Eligible (EDR
Recommended)



Survey ID: 11

Prospect and Rossman Aves
City of Hudson, Columbia
County

Resource ID: 90NR00254

Name and/or Description:

Rossman--Prospect Avenue
Historic District

Previous S/NRHP

Determination: S/NRHP-
Listed Resource

EDR S/NRHP

Recommendation:
S/NRHP-Listed Resource

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

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**FLINT
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Survey ID: 12

4414 US 9

Town of Greenport, Columbia
County

Resource ID: N/A

Name and/or Description:

A two-story Greek Revival-style
residence

Previous S/NRHP

Determination: N/A

EDR S/NRHP

Recommendation:

S/NRHP-Eligible Resource (EDR
Recommended)



Survey ID: 13

4 State Route 385

Town of Catskill, Greene
County

Resource ID: 10NR06129

Name and/or Description:

Moore-Howland Estate (Private
access only)

Previous S/NRHP

Determination: S/NRHP-
Listed Resource

EDR S/NRHP

Recommendation:

S/NRHP-Listed Resource

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

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**FLINT
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Survey ID: 14

Church Hill
Town of Greenport, Columbia
County

Resource ID: 90NR00232

Name and/or Description:
Olana

**Previous S/NRHP
Determination:** National
Historic Landmark

**EDR S/NRHP
Recommendation:** National
Historic Landmark

Flint Mine Solar

Towns of Coxsackie and Athens, Greene County, New York

Appendix B: Photographs

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