

**Update to the Application for a Certificate of
Environmental Compatibility and
Public Need Pursuant to Article 10 of the New York
State Public Service Law**

Garnet Energy Center
Town of Conquest, Cayuga County, New York

Case No.: 20-F-0043

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Attachment A2: Updated Exhibit 4- Land Use (clean)

Attachment B1: Updated Exhibit 11- Preliminary Design Drawings (redlined)

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ACRONYMS

AC	alternating current
AJD	Approved Jurisdictional Determination
DC	direct current
HDD	horizontal directional drilling
kV	kilovolt
MW	megawatt
NYPA	New York Power Authority
POI	Point of Interconnection
PSL	Public Service Law
PV	Photovoltaic
USACE	U.S. Army Corps of Engineers
WOTUS	Waters of the United States

1.0 INTRODUCTION

On June 28, 2021, Garnet Energy Center, LLC (the Applicant) submitted an Application (“Application”) under Article 10 of the Public Service Law (PSL) to construct and operate a 200-megawatt (MW) solar energy center, including a 20-MW/4-hour duration energy storage system (the “Project”) in the Town of Conquest, Cayuga County, New York. On September 27, 2021, the Applicant filed a Supplement to the Application that included a response to deficiencies in the Application identified by the Siting Board Chair, as well as supplemental information figures and appendices. On November 1, 2021, the Siting Board Chair deemed the Application compliant with PSL §164. Since the Application was deemed compliant, the proposed layout of the Facility has been updated in order to reduce potential impacts to wetlands and waterbodies; reduce potential impacts to agricultural land uses; and reduce potential visibility to visual receptors in the area.

These impact reductions are the result of updates made to the Project layout, specifically the removal of originally proposed solar arrays, which were intended to reduce resource impacts (as summarized in Table 1) and described in the attachments included with this Update. In total, approximately 152 acres of arrays have been removed from the proposed layout of the Project, a reduction of approximately 19 percent (Refer to Attached Figure 1 – Updated Project Layout). Exhibits 4, 11, 22, 23, and 24; Figures 3-1, 4-8, 22-1, 22-2, 22-3, 22-4, 22-6, and 22-7; and Appendices 11-1, 11-2, and 22-4 have been updated to reflect these updates. Additionally, a memorandum detailing updates to Exhibit 19, and an additional Figure 24-1 showing the Updated Project layout, have been provided.

Table 1- Resource Impact Summary

Resource	Total Impact presented in Article 10 Application	Total Net Impact presented in this Application Update ²	Total Net Impact Reduction (percent reduction)
NYSDEC Mapped Wetlands	43.85 acres	0.5 acres (T: 0.11 / P: 0.27 / C: 0.12)	43.35 acres (98.86 percent)
NYSDEC Mapped Wetland Adjacent Areas	45.21 acres	10.47 acres (T: 5.31 / P: 2.93 / C: 2.23)	34.74 acres (76.84 percent)
USACE-Jurisdictional Wetland Impacts	92.31 acres	29.75 acres (T: 5.41 / P: 10.26 / C: 14.07)	62.56 acres (67.77 percent)
Non-USACE Jurisdictional Wetland Impacts	11.49 acres	5.99 acres (T: 0.53 / P: 4.73 / C: 0.74)	5.5 acres (47.87 percent)
Streams	15,737 linear feet	8,324 linear feet (T: 284 / P: 8,040)	7,413 linear feet (47.11 percent)
Tree Clearing	260.32 acres	159.61 acres	100.71 acres (38.69 percent)
Agricultural Land ¹	806.21 acres	750.59 acres (of which only 19.1 acres of permanent ground disturbance to agricultural land will occur)	55.62 acres (6.90 percent)

Resource	Total Impact presented in Article 10 Application	Total Net Impact presented in this Application Update ²	Total Net Impact Reduction (percent reduction)
Predicted Visibility	3.49 square miles	3.23 square miles	0.26 square miles (7.45 percent)
1. Based on cover types identified by Exhibit 22 2. "T" equals Temporary impact acres/linear feet, "P" equals Permanent impact acres/linear feet, "C" equals Conversion impact acres/linear feet			

The updates to the Project layout are described below and detailed in Attachment C: Updated Appendix 11-1. Preliminary Design Drawings. The Project description below reflects the updated design and layout presented in this Update:

- Photovoltaic (PV) solar panels:** The Project will have a generating capacity up to 200 MW of electricity in the Town of Conquest. The Applicant proposes to utilize a solar module such as the Jinko Solar Eagle 72HM G2 390-Watt Mono Perc Diamond Cell. The Garnet Energy Center (the Project) also proposes to utilize a solar fixed array racking system such as the Gamechange Solar MaxSpan™ System. The panels and racking will cover approximately 326.76 acres of the Project Area within a fenced area of approximately 901 acres as opposed to approximately 512 acres of panels within a fenced area of approximately 1,050.6 acres proposed in the original Application.
- Access roads:** The length of permanent access roads proposed throughout the Project Area has been reduced from approximately 12.1 miles to 10 miles. Access road widths will be approximately 12 feet in the area of the solar arrays and approximately 20 feet for the substation and switchyard. They will be constructed of gravel per engineering specifications.
- Collection Lines:** The total length of collection line included as part of the Application for the Project was approximately 25.5 miles. A total of approximately 26.7 miles of collection lines are proposed by this Update to connect the inverters with the Project collection substation. Of those, approximately 26.2 miles are proposed via underground direct burial and approximately 0.5 miles via horizontal directional drilling (HDD).
- Inverters:** Throughout the solar arrays, 68 inverters are proposed to convert the direct current (DC) electricity generated by the solar modules into alternating current (AC) electricity. Although the number of inverters proposed by this Update is the same as what was proposed in the Application, the location of 67 of these inverters has changed as a result of the Updated Project layout.
- Collection Substation:** No updates have been proposed to the Collection Substation. The proposed collection substation will be located in the central portion of the Project Area and will include electrical, control, and protective systems, including a collection feeder, circuit breakers, a 34-kilovolt (kV) bus, a main power transformer that would increase the voltage from 34.5 kV to 345 kV, disconnect switches, and metering/relaying transformers.

- **Point of Interconnection (POI) Switchyard Facilities:** No updates have been proposed to the Point of Interconnection (POI) Switchyard Facilities. To deliver power to the New York State power grid, the Applicant proposes to interconnect to the existing New York Power Authority (NYPA) Clay to Pannell 345-kV transmission line by two overhead 345-kV transmission lines of approximately 207 and 563 feet, respectively. The switchyard and tap line will be transferred to NYPA to own, maintain, and operate.
- **Fencing and Gating:** Approximately 901 acres of fenced area are proposed by this Update, including gates in multiple areas along the fencing for access by operations and maintenance personnel and for emergency access. The total fenced area of the Project has been reduced by 149.6 acres from the original Application. Fencing is proposed at 7 to 8 feet high and will be chain-link fencing. Fencing is proposed to be placed around the perimeter of the arrays and associated structures. Only the fencing around the collection substation and switchyard will be topped with barbed wire for safety and security reasons.
- **Temporary Construction Laydown Areas:** Approximately 7 acres of temporary construction laydown areas are proposed for use during the construction of the Project, compared to the 7.4 acres proposed in the original application.
- **Energy Storage System:** No updates have been proposed to the Energy Storage System. The Project also includes an energy storage system with a capacity of 20 MW for a 4-hour duration. The energy storage system is comprised of 11 units located throughout the Project Area adjacent to Project inverters that will be contained within cabinets that are anticipated to be approximately 11 feet, 4 inches (3.5 meters) in height. The Applicant proposed to utilize a Samsung SDI lithium-ion energy storage system or a similar system for the Facility.

2.0 ADDITIONAL INFORMATION UPDATING THE ARTICLE 10 APPLICATION

2.1 Exhibit 4. Land Use and Figure 4-8. Aerial Photography of the Project Area

Based on the Updated Project layout, soil disturbance to of NYSORPS-designated agricultural land has been reduced by approximately 6 percent (50.1 acres). Additionally, at the time of filing, the Applicant proposed permanent impacts to 14.7 acres of mineral soil groups 1 through 4 and following the layout update, only 12.6 acres of permanent impacts are now anticipated resulting in a 14.3 percent reduction in permanent impacts to mineral soil groups 1 through 4. The Application also reported that the proposed LOD encompassed 485.6 acres of Prime Farmland which has now been reduced to 464.7 acres through the proposed layout update, resulting in a 4.3 percent reduction to the proposed LOD encompassing Prime Farmland within the Project Area. Exhibit 4 has been updated to reflect the information described above and has been included herein as Attachments A1 and A2 (redlined and clean copies, respectively).

Figure 4-8. Aerial Photography of the Project Area has been updated and is included as Attachment S. It has been updated to provide a detailed overview of the updated panel layout.

2.2 Exhibit 11. Preliminary Design Drawings, Appendix 11-1. Preliminary Design Drawings, Appendix 11-2. Preliminary Landscape Plans, and Figure 3-1. Project Component Locations

Exhibit 11. Preliminary Design Drawings, the Preliminary Design Drawings themselves, and the Preliminary Landscape Plans have been updated to reflect the reductions to the Project layout and have been included herein as Attachments B1/B2, C, and D, respectively. As discussed, the updates made to the Project layout were primarily focused on the removal of array, to the maximum extent practicable, to minimize impacts to natural resources. The total area of solar array proposed by this Update is approximately 636.71 acres, a 19 percent reduction from what was presented in the Application.

Within Exhibit 11, references to 'Appendix 24-3' to the original Application, known as the Glare Mitigation Package, were removed. The updated landscaping plans (Attachment D to this update) now includes all proposed landscape mitigation in one drawing set that depicts both landscaping proposed for screening Project visibility and landscaping added specifically for the purpose of glare mitigation.

In addition, the proposed tree clearing acreage was reduced from 262 to 159.6 acres and the Project site plan drawings have been updated accordingly.

Figure 3-1. Project Component Locations has been updated and is included as Attachment R. It has been updated to provide a zoomed out overview of the updated panel layout.

2.3 Noise and Vibration Memo

As part of the proposed Update, 67 (of 68 total) inverters were relocated within the Project Area, resulting in updates to the noise and vibration modeling previously provided in the Application. The total quantity of inverters, the inverter type, the total number of BESS units, and the BESS unit technology in the Project has not been updated, and the location of the Project substation has not been updated. The previous inverter layout proposed in the Application required sound mitigation for three of the Project inverters in order to achieve compliance with the 1-hour L_{eq} noise design goal of 45 dBA at non-participating residences. The layout proposed in this Update will require mitigation at a total of five inverters, in order to meet all noise design goals. To further address these updates, a Noise and Vibration memorandum prepared by Epsilon Associates has been included as Attachment E.

2.4 Exhibit 22. Terrestrial Ecology and Wetlands, associated Figures, and Wetland Delineation Report

At the time of filing, the Application reported that Project construction would result in 192.86 acres of impacts to NYSDEC mapped and USACE Jurisdictional and Non-Jurisdictional wetlands and waterbodies. Based on the Update to the Project layout these impacts have been reduced by 146.15 acres, a total reduction of approximately 76 percent. Also, since the filing, at the request of the U.S. Army Corps of Engineers (USACE), additional wetland areas were delineated within the Project Area. The Wetland Delineation Report (Appendix 22-4 of the Article 10 Application) has been updated to reflect the additional wetland areas that were delineated and is included

herein as Attachment M. Based on the final delineation report, the USACE issued an Approved Jurisdictional Determination (AJD) on December 14, 2021 stating that wetlands W-BTF-2, W-BTF-11, and W-NSD-3; and streams S-BTF-7A and S-NSD-2A are not considered to be Waters of the United States (WOTUS) and therefore, authorization for the proposed work within them is not required by the USACE.

Temporary impacts to DEC mapped wetlands have been reduced from 14.6 acres to 0.11 acres, conversion impacts have decreased from 29.04 acres to 0.12 acres, and permanent impacts have increased slightly from 0.13 acres to 0.27 acres. As a result, the Applicant has eliminated impacts to delineated wetland W-JJB-2 and DEC mapped wetlands W-2 and M-2. Additionally, temporary impacts to USACE Jurisdictional wetlands have increased from 4.65 acres to 5.41 acres, conversion impacts have decreased from 87.41 acres to 14.07 acres, and permanent impacts have increased from 0.26 acres to 10.26 acres. Note that permanent impacts to wetlands have increased primarily as a result of reclassifying Type I tree clearing (which includes tree stump removal and associated ground disturbances) as a permanent impact rather than a conversion as it was classified in the Article 10 Application.

Despite these additional permanent impacts, the Applicant still achieved an overall reduction in impacts proposed to NSYDEC mapped wetlands of 98.86 percent and an overall reduction in impacts proposed to USACE Jurisdictional wetlands of 67.77 percent.

With regard to terrestrial ecology, the total wildlife habitat permanently lost due to placement of Project components has decreased by 3.94 acres. Moreover, 19.10 acres (93.06) percent of the wildlife habitat permanently lost consists of agricultural areas providing limited perpetual wildlife habitat due to the regular disturbances and anthropogenic pressures of active farming practices. The total acreage of forest clearing has been reduced from 260.32 acres to 159.61 acres, a reduction of 38 percent. Additionally, impacts to agricultural lands by Project components have been reduced by approximately 55.62 acres.

Exhibit 22 has been updated accordingly and has been included herein as Attachments F1/F2. The figures associated with Exhibit 22 that show detailed design have also therefore been updated to reflect the layout and are included as Appendices G through L. These include the figures titled "Figure 22-1. Plant Communities of the Project Area," "Figure 22-2. Plant Communities within 100 ft of Disturbance," "Figure 22-3. Delineated Wetlands and Streams," "Figure 22-4. Mapped Wetlands," "Figure 22-6. Wildlife Mapping," and "Figure 22-7. Impacts to Wetlands and Streams."

2.5 Exhibit 23. Water Resources and Aquatic Ecology

At the time of the filing, the Application reported that the Project construction would result in 15,462 linear feet of temporary disturbance and 275 feet of permanent disturbance to delineated streams. Based on updates to the Project layout these impacts have been reduced to 8,040 linear feet and 284 linear feet respectively, resulting in an overall reduction to stream resources by 46.27 percent. Since the Application filing, three additional stream features (Streams S-BTF-7B, S-NSD-2B, and S-NSD-10) have been delineated within the Project Area. The USACE issued an AJD on December 14, 2021, stating that streams S-BTF-7A and S-NSD-2A are not

considered to be Waters of the United States (WOTUS) and therefore, authorization for the proposed work is not required by the USACE.

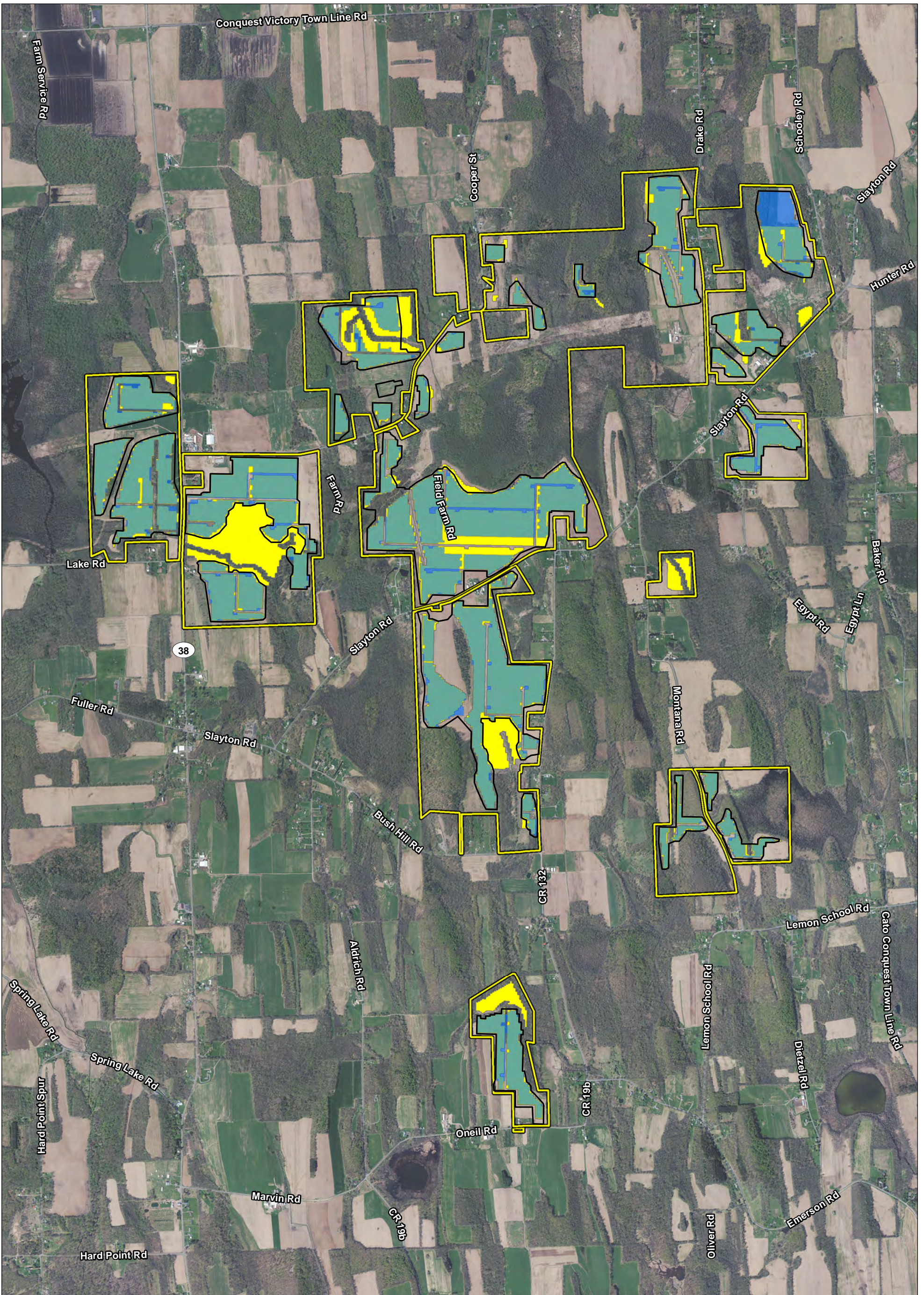
Exhibit 23 has been revised to reflect these updates and has been included herein as Attachments N1/N2.

2.6 Exhibit 24. Visual Impacts

Figure 24-1, presented in Attachment P herein, shows the proposed layout updates. Overall, the total area of panels and racking systems that will cover the Project Area was reduced from approximately 512 acres to 326.76 acres and the fenced-in area that will consist of Project Components was reduced from approximately 1,054 acres to 901 acres as a result of the update. In order to still achieve this significant reduction in proposed solar arrays and still achieve the Project's required generating capacity of 200 MW, a minor addition of arrays is proposed in an area not visible to adjacent landowners. This area is located in the northeastern portion of the Project west of Schooley Road, where approximately 13.8 acres of panels have been added to an area where they were not previously proposed. Refer to Inset 1 in Figure 24-1 for this area of added panels. An updated viewshed analysis was performed with the inclusion of the added panels (and proposed removal of others) but with a focus of understanding any potential new visibility to residences along Schooley Road. Based on the updated viewshed analysis, a new visible area extends into the open field to the north where no members of the public are expected to be, where no existing residences exist, and would likely be visited infrequently by the landowner. As seen in Inset 1 of Figure 24-1, this new area of visibility totaling 5.3 new acres (0.008 square miles) of visibility does not impact residences on Schooley Road nor any aesthetic resources. Project-wide, with both the additional and removed solar arrays, visibility is reduced by 0.26 square miles (7.45 percent). Also, to supplement the visual study for the residences on Schooley Road east of the added panels, a Line of Sight analysis was performed at a representative property. As observed in Inset 1 of Figure 24-1, a forested area exists between the added panels and Schooley Road residences that are to the east. This forested area is also on a hill. Both vegetation and terrain are expected to preclude westerly views to the added array area from nearby eastern residences as demonstrated in Line of Sight Profile Figure 24-2.

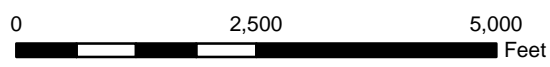
In addition, there is also reduced tree clearing resulting from the proposed layout update as well as changes to the Landscape Plan.

Exhibit 24 has been updated to reflect the changes detailed above and has been included herein as Attachments O1/O2. However, following these updates, the conclusion is that on balance, the VIA results presented in the June 28, 2021 Application and overestimate potential visibility of the Updated Project and Project visibility is now less due to the updated layout.



- PROJECT AREA
- SECURITY FENCE
- AREAS OF ARRAY REDUCTION
- AREAS OF ADDITIONAL ARRAY
- UNCHANGED AREA OF ARRAY

Data: Data: TRC, Westwood
 Base Map: USGS Topo, Esri and its contributors



MAP LOCATION



PROJECT COMPONENT LOCATIONS
GARNET ENERGY CENTER, LLC
TOWN OF CONQUEST, NY

FIGURE 1 | JANUARY 2022

Map Produced by TRC