



**BROOKSIDE SOLAR, LLC**

**Matter No. 21-00917**

**900-2.9 Exhibit 8**

**Visual Impacts**

**Contents**

Exhibit 8: Visual Impacts ..... 1

    8(a) Visual Impact Assessment..... 1

        (1) The Character and Visual Quality of the Existing Landscape.....2

        (2) The Visibility of the Facility ..... 11

        (3) The Visibility of Above-Ground Interconnections and Roadways to be Constructed within the Facility ..... 13

        (4) Appearance of the Facility Upon Completion ..... 15

        (5) Lighting and Similar Features ..... 16

        (6) Representative Views (Photographic Overlays) of the Facility ..... 17

        (7) The Nature and Degree of Visual Change from Construction of the Facility and Above-Ground Interconnects ..... 17

        (8) The Nature and Degree of Visual Changes from Operation of the Facility and Above-Ground Interconnects ..... 18

        (9) The Related Operation Effects of the Facility ..... 23

        (10) Visual Resources Affected by the Facility..... 24

        (11) Cumulative Effects ..... 37

    8(b) Viewshed Analysis..... 41

        (1) Viewshed Mapping and Line-of-Sight Profiles ..... 41

        (2) Viewshed Analysis and Line-of-Sight Profiles Methodology ..... 42

        (3) Viewer Group Overview ..... 45

        (4) Important and Representative Viewpoints ..... 46

    8(c) Visual Contrast Evaluation..... 51

        (1) Facility Simulations and LOS Profiles ..... 51

        (2) Simulations Illustrating Mitigation ..... 64

        (3) Simulation Contrast Ratings ..... 64

    8(d) Visual Impacts Minimization and Mitigation Plan..... 71

        (1) Advertisements, Conspicuous Lettering, or Logos ..... 74

        (2) Electrical Collection System ..... 74

        (3) Electrical Collection and Transmission Facilities ..... 75

---

(4) Non-Specular Conductors .....	75
(5) FAA Wind Turbine Color Requirements .....	75
(6) Shadow Flicker for Wind Facilities .....	75
(7) Glare for Solar Facilities .....	75
(8) Planting Plan.....	75
(9) Lighting Plan .....	77
Conclusions .....	79
References.....	80

**Tables**

Table 8-1. Percentage of LSZs within 2-Mile VSA.....	10
Table 8-2. Percent Visibility within Distance Zones .....	12
Table 8-3. Percent Visibility of the Collection Substation within Distance Zones .....	14
Table 8-4. Inventory of Visual Resources within the 2-Mile VSA.....	26
Table 8-5. Cumulative Effects – Percentage of Overlapping Visibility of Nearby Wind Projects With the Proposed Facility .....	40
Table 8-6. Summary Table of Simulation and LOS Viewpoints .....	48
Table 8-7. Visual Impact Rating Results.....	66

**Appendices**

Appendix 8-1	Visual Impact Assessment
--------------	--------------------------

## Acronym List

3D	three-dimensional
AC	Alternating Current
AES	The AES Corporation, Inc.
APA	Adirondack Park Agency
ASL	above sea level
BLM	Bureau of Land Management
CAD	Autodesk Civil 3D 2020
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
GPS	Global Positioning System
HDD	Horizontal Directional Drilling
IFP	Issued for Permit
LiDAR	Light Detection and Ranging
LOS	Line-of-Sight
LSZ	Landscape Similarity Zones
MAX	Autodesk 3DS Max 2020
NESC	National Electrical Safety Code
NLCD	National Land Cover Dataset
NPS	National Park Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRT	National Recreation Trails
NYNHP	New York Natural Heritage Program
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York Department of Transportation
NYSGPO	New York State GIS Program Office
OPRHP	Office of Parks, Recreation and Historic Preservation
ORES	Office of Renewable Energy Siting
OSHA	Occupational Safety and Health Administration
SHPO	State Historic Preservation Office

USCs	Uniform Standards and Conditions
USDA	United States Department of Agriculture
USDOI	United States Department of the Interior
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VIA	Visual Impact Assessment
VP	Viewpoint
VSA	Visual Study Area

## Glossary Terms

<b>Applicant</b>	Brookside Solar, LLC, a subsidiary of The AES Corporation, Inc. (AES), the entity seeking a siting permit for the Facility from the Office of Renewable Energy Siting (ORES) under Section 94-c of the New York State Executive Law.
<b>Facility</b>	The proposed components to be constructed for the collection and distribution of energy for the Brookside Solar Project, which includes solar arrays, inverters, electric collection lines, and the collection substation.
<b>Facility Site</b>	The parcels encompassing Facility components which totals 1,471 acres in the Towns of Burke and Chateaugay, Franklin County, New York.
<b>Towns</b>	The Towns of Burke and Chateaugay, Franklin County, New York.

## Exhibit 8: Visual Impacts

### 8(a) Visual Impact Assessment

To determine the extent and assess the significance of the visibility of the Facility, a Visual Impact Assessment (VIA) has been prepared to comply with the requirements of 19 NYCRR §900.2.9 in support of this Section 94-c Application. The VIA includes both quantitative and qualitative identification of visually sensitive resources, viewshed mapping, confirmatory visual assessment fieldwork, photographic simulations, and proposed visual mitigation. In completing the VIA, local municipalities and State agencies were consulted; applicable guidance and information was incorporated into the assessment. The study area (referred to as the “visual study area” or VSA) for this VIA extends two miles around the fence line of the proposed Project. This Exhibit 8 provides an abbreviated version of the VIA and addresses the issues presented herein. Please refer to the full VIA in Appendix 8-1 for greater detail.

#### Consistency Review for the Assessment of Visual Impacts Pursuant to the Requirements of Adopted Local Laws or Ordinances.

Pursuant to §900.2.9(b)(4)(v), a consistency review for the assessment of visual impacts pursuant to the requirements of adopted local laws or ordinances was performed. The Applicant consulted with the local municipalities regarding the local requirements applicable to the Facility. In February 2021, the Applicant sent letters to the Towns of Burke and Chateaugay to consult with the local municipalities providing them with the information required by §900-1.3 of the 94-c Regulations. Following the meeting, the Applicant provided each Town with a list of the applicable local ordinances, laws, resolutions, regulations, standards, and other requirements of a substantive nature required for the construction and operation of the Facility. The Towns have not indicated to the Applicant that there are any other applicable laws or substantive requirements other than those identified below.

The Towns of Burke and Chateaugay have identical Solar Energy Laws, which define solar energy systems into three tiers. Because the proposed Facility will generate 100 MW of energy and the energy will be distributed throughout New York State (NYS), the proposed Facility is defined as a Tier 3 Solar Energy Facility (Town of Chateaugay, 2018; Town of Burke, 2019).

While the local laws and codes provide some requirements for visual analyses/assessments, it is concluded that the 94-c regulations will satisfy the requirements for a facility visual impact assessment for the Facility. The 94-c regulations exceed what the local codes require.

Appendix 8-1 VIA Section 2.2 describes in further detail the language or requirements specific to analyses or assessments for visual impacts in the local Solar Energy Laws for the Towns of Burke and Chateaugay. Please also refer to Exhibit 24 for a discussion of all local ordinances, laws, resolutions, regulations, standards and other requirements applicable to the construction or operation of the facility.

***(1) The Character and Visual Quality of the Existing Landscape***

The Facility is in the Towns of Burke and Chateaugay, New York, in the northeast section of Franklin County approximately 3.8 miles south of the Canadian border and four miles north of the Adirondack Park boundary at Belmont. The nearest larger town to the Facility is Malone, the county seat, approximately eight miles to the southwest. The VSA is rural and primarily consists of open, agricultural lands with discrete locations of large mixed forest groups, as well as rural residential land that is located along roadways. Agricultural District #1 is prevalent within the VSA. Agricultural land consists of hay and alfalfa along with row crops of corn and soybean fields. Wooded riparian zones parallel each side of the Chateaugay River that is approximately 0.25 miles wide total or more.

***Landform***

The Facility is in the Towns of Burke and Chateaugay, New York, in the northeast section of Franklin County approximately 3.8 miles south of the Canadian border and four miles north of the Adirondack Park boundary at Belmont. The nearest larger town to the Facility is Malone, the county seat, approximately eight miles to the southwest. The VSA is rural and primarily consists of open and agricultural lands with discrete locations of large mixed forest groups, as well as rural residential land that is located along roadways. Agricultural District #1 is prevalent within the VSA. Agricultural land consists of hay and alfalfa along with row crops of corn and soybean fields. Wooded riparian zones parallel each side of the Chateaugay River that is approximately 0.25 miles wide total or more.

Physiographically, the northern two-thirds of the Facility lies within the St. Lawrence Lowlands physiographic province while the southern one-third of the Facility lies within the Adirondack



Mountains physiographic province. The St. Lawrence Lowlands is characterized as a smooth glacial plain where maximum elevation of the province is about 1,300 feet. Within the two-mile VSA, topography trends from low, in the north section of the VSA within the St. Lawrence Lowlands to higher as one proceeds south toward the Adirondack Mountains. Within the two-mile VSA, there is a topographic difference of 839 feet, ranging from 404 feet to the north near Cooks Mill to 1,243 feet to the south in the Adirondack Mountain Province near Mary Carey Road. Specifically within a half-mile of the Facility, there is an elevation difference of 577 feet, ranging from 516 feet near Lewis Road (north) to 1,093 feet near Jerdon Road (south), with a difference of 577 feet. Local relief consists of low hills with gentle slopes.

### ***Water***

The principal streams are the Chateaugay River and its branches. The Chateaugay River runs north-south on the eastern side of the VSA and has a substantial wooded riparian zone. A segment of the Chateaugay River that runs through the VSA also has a Nationwide Rivers Inventory (NRI) designation, both as scenic and with geologic value due to a 100-foot gorge between Chateaugay Lake and north to Brayton Hollow. NRI rivers are potential candidates for inclusion in the National Wild and Scenic River System. The Marble River is located in the very northeastern portion of the VSA and generally runs parallel to County Road 35. Each of these rivers have NYS-designated fishing rights easements. Other smaller perennial streams in the VSA include Allen Brook, which wraps around the western side of the Facility, Alder Brook 1.8 miles to the west, and Bailey Brook 0.8 miles to the east (a portion of which runs through the Village of Chateaugay).

### ***Land Use and Development***

The VSA is rural in nature and as such is dominated by forest and agriculture. In this setting, development is generally seen along transportation corridors and within community settings (e.g., cities, villages, hamlets).

### **Transportation**

Roadways in the vicinity are important to understand since they are one of several viewer groups that may receive Facility visibility. This viewer group could consist of local community, commuter, or tourist constituency on a daily or infrequent basis. Although limited in number, there are different types of transportation corridors, or roadways, within the VSA. These

roadways range from the two-lane paved state route that sees a higher number of users to the narrower one-lane gravel road accommodating a limited number of users.

Existing roadways fall into functional classifications as defined by the New York State Department of Transportation (NYSDOT) Office of Technical Services. These classifications with roadway identification are useful for understanding the character of the VSA. Photographs in the Appendix 8-1 VIA are taken from places accessible to the public and include roadway rights-of-way. Several of these photographs are in the vicinity of residential areas where functional classes of roads assist in understanding the density or frequency of travel in these areas.

*Arterial Roads* provide the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control. Under this category, US Route 11 is classed as Principal Arterial Other. Principal Arterials Other is a non-interstate that consist of a connected rural network of continuous routes that serve corridor movement having trip length and travel density characteristics indicative of substantial statewide or interstate travel and provide an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise.

*Collector Roads* provide a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials. Under this category, County Route 52 is classed as a Major Collector. Major Collectors generally have few driveways and also allow for minimal disruption to the through traveling vehicles. Minor Collectors generally are spaced at intervals to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road, while providing service to the remaining smaller communities and linking the locally important traffic generators with their rural areas. The Minor Collector roadways within the VSA are County Route 29, County Route 23, and County Route 33.

*Local Roads* consist of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement. Local roads that run adjacent to the Facility include Lewis, Stuart, Martin, and East Roads that lie north of US Route 11. Local roads adjacent to the Facility that are south of US Route 11 are Ketchum, Cemetery, and Jerdon Roads.

In addition to the classifications, the roadways in the Facility Area are generally rural in nature and generally provide one travel lane in each direction with limited shoulder and roadside treatments.

Additional information regarding the transportation analysis performed on existing conditions in the vicinity of the Facility Site, including an evaluation of construction and operation of the Facility, can be found in Exhibit 16 (Transportation Effects).

Community/Residential

Solar panels are proposed in the Towns of Burke and Chateaugay, New York. The definition of the VSA is a 2-mile radius around the fence line of the proposed solar arrays.

Overall, the VSA contains a limited number of residents. The communities within the VSA along with population estimates sourced from The U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates are provided below:

Town/Village	Population (2019 Estimates)
Burke	1,413
Chateaugay	1,595
Village of Burke	262
Village of Chateaugay	745

Other non-incorporated recognized populated places and minor civil divisions within the VSA, as recognized by the United States Geological Survey (USGS) Geographic Names Information System (GNIS) database include Thayer Corners, Brayton Hollow, Burke Center, and Cooks Mill.

Communities that fall within 0.5 miles: Towns of Burke and Chateaugay, minor civil divisions of Thayer Corners and Brayton Hollow.

Communities that fall between 0.5 and two miles: Towns of Burke and Chateaugay, Villages of Burke and Chateaugay, and minor civil divisions of Burke Center and Cooks Mill.

Various views of the rural character and the nature of the area within the VSA can be obtained in the Appendix 8-1 Facility Photolog. Much of the residential development in the VSA consists of rural residential houses along roadways. Higher density of development occurs in the Villages of Chateaugay and Burke. Representative photos of the villages and the minor civil divisions can be found in the Facility Photolog as well.

#### Existing Energy Infrastructure

Aboveground infrastructure of varying heights, materials, and configurations may be seen within the VSA. The Facility will interconnect to the existing NYSEG Line 911 Willis Road to Chateaugay 115-kV transmission line. This transmission line runs from the existing Chateaugay Substation located on U.S. Route 11 south to the Willis Substation off of County Route 33 where transmission lines diverge to the east, west, and south.

Within the VSA, the Jericho Rise Project, a 37-turbine, 77.7-MW wind farm is in the Towns of Chateaugay and Belmont and is located south of US Route 11. The wind farm went online in 2016. Sixteen turbines fall within the VSA. The turbines are approximately 492 feet tall (150 meters). The Facility Photolog in Appendix 8-1 representing the character of the area in the VSA show several Jericho Rise turbines in the existing view.

Adjacent to the VSA (and east of the Village of Chateaugay) is the existing Noble-Chateaugay Wind Farm, a 106.5-MW capacity wind farm with 71 turbines approximately 389 feet tall (119 meters). Three turbines fall within the VSA, approximately 450 feet and less from the boundary of the outer eastern extent. The remaining turbines are outside of the VSA.

Adjacent to the Willis Substation on County Route 33, approximately 1.5 miles south of the Facility, is the 20-MW capacity North Country Energy Storage facility, a battery storage project that began construction in August of 2020 and has an anticipated completion date of 2022.

#### Publicly Known Proposed Land Uses

The Applicant has reviewed publicly available information, including town documents, public notices, and town board meeting minutes and has determined that there are four known proposed land uses.

- a 5 MW solar facility by Nexamp Solar located south of US Route 11 off of Ketchum Road in Burke.
- Glengarry Solar Project, an AES solar facility located south of US Route 11 on Glengarry Farms property in Burke
- A 15 MW solar facility on US Route 11 in Chateaugay, approximately 3.8 miles east of the Brookside Solar Project and 1.7 miles outside of the study area.
- Terra-Gen is proposing to construct the North Country Wind Project, a 298-MW 60-turbine wind farm in Burke and Chateaugay, which is proposed to be online in 2023 or 2024. Location details are unknown at this time.

### Distance Zones

Establishment of Distance Zones are required as cited in §900-2.9 (b)(1) of the 94-c regulations and are based on Facility distances to an observer. Each of these areas will determine the level of detail and acuity of objects. Historically, these zones have been defined in documents produced by the U.S. Forest Service or the Bureau of Land Management and refined to those jurisdictional lands that are prevalent in the western part of the country. Those western applications are often not as relevant to land in the northeast. The effects of distance highly depend on the characteristics of the landscape. However, size, level of visibility perceived for this particular type of project (solar panels), and panel position in the landscape should also be considered in determining zones. Solar panels are not wind turbines or tall buildings. They are of a different character with a low vertical height profile in comparison to other larger objects found in the landscape such as houses, barns, and trees, in addition to the rolling topography in the area that could easily visually obstruct farther locations. Solar projects typically have lateral breadth but the visibility of solar projects in the northeast, because of frequent and highly vegetated narrow ridges and valleys and dense forest areas surrounding agricultural lands, often do not offer substantial far-reaching vistas of many miles. Distance zones for this Facility have been reasonably modified from the US Forest Service Handbook to accommodate the VSA radius, limitations of human vision and perceptible detail of the low profile of the Facility components, and how much of the Facility can actually be seen. Two distance zones for this Facility are applicable in relation to the 94-c 2-mile VSA:

- Distance Zone 1: Foreground (up to 0.5 miles from the viewer). This is the closest distance at which details of the landscape and the solar panels can be seen. Individual landscape forms are typically dominant and individual panel strings and racking system detail may be seen. The concentration of predicted visible areas typically lies within this zone.
- Distance Zone 2: Middleground to Background (0.5 to two miles from the viewer). At this distance, individual tree forms and building detail can still be distinguished at, for example, one mile. The outer boundary of this distance zone, however, is defined as the point where the texture and form of individual plants are no longer visibly acute in the landscape. In some areas, atmospheric conditions can reduce visibility and shorten the distance normally covered by each zone. Solar panels lose their level of detail and are seen as a continuous mass of form and/or color. Typically, the concentration of predicted visibility decreases in this zone due to the more abundant screening effects of trees, buildings, and topography that lies between a viewer and the Facility.

It should be noted that although limits of the two-mile VSA is presumed, §900-2.9 (b)(1) also states that any potential visibility from specific significant visual resources beyond the specified study area should also be examined. There are no such resources beyond two miles and is not applicable.

### Landscape Similarity Zones

Landscape Similarity Zones (LSZs) are areas of similar landscape and aesthetic character based on patterns of landform, vegetation, water resources, land use, and user activity. These zones provide additional context for evaluating viewer circumstances where relationships between viewer groups and visual experience can be made, as well as understanding the influence that the LSZ has on visibility. For example, a viewer's experience will be different in a forested area vs. open water vs. open land vs. urban areas. Viewer groups, as well as potential viewer frequency and duration of view, can also be estimated as they relate to LSZ.

Land cover classification datasets from the 2016 USGS National Land Cover Dataset (NLCD) are available for GIS analysis and were used for an initial establishment of LSZs as they provide distinct and usable landscape categories. These NLCD land cover groupings were then refined based on aerial photo interpretation and general field review into land category characteristics

that have the ability to influence or be influenced by visibility of the Facility. This effort resulted in the definition of five LSZs within the VSA, including the following:

- **Zone 1: Agricultural** – This LSZ is characteristic of open land, including that which is used for row crops, hay, or pasture, or left fallow. These lands are relatively flat to rolling and may contain small, wooded areas, and hedgerows. Development would be limited and sparsely located; single family homes and farmsteads (including barns and silos) make up the majority of built structures and are likely found along the County Routes or local roads that bisect this LSZ. Where available, structures, hedgerows, vegetated-lined waterways/ravines, and woodlots can screen views, whether short or long distant, toward to the proposed Facility. Agricultural lands are most often privately owned and while they may be abundant in a particular area, the numbers of the viewing public, as well as the frequency and duration of viewers, is likely low.
- **Zone 2: Forested** – This zone includes mature deciduous and coniferous tree groups either in uplands or wetlands. Forested areas can be a large, isolated grouping of trees or large contiguous tracts likely owned by private entities or the State. Those forested lands owned by public entities (e.g., New York State Department of Environmental Conservation [NYSDEC]) may offer the public with recreational activities such as hunting, nature viewing, hiking, camping, etc. Views may be very limited as opportunities for outward viewing of the surrounding landscape will be minimized by the tree canopy. It should be noted that views through the vegetation may be available during leaf-off conditions but is likely to be confined to along the edge of a forested area.
- **Zone 3: Developed** – This zone includes villages, towns, cities, minor civil divisions, rural residential abutting roadways, and transportation corridors. Thus, this zone includes those areas that are expected to have the highest number of observers whether rural, urban, static, or transient. Typically, villages and towns may not have prevalent views of other development at distance since more densely spaced building structures or existing streetside trees can preclude many views. Privately owned rural residential dwellings, if in close proximity to the Facility, have a higher likelihood of receiving views of a nearby project. Roadways absent of roadside vegetation can also potentially afford many transient and intermittent views of short duration to numbers of the viewing public.

- Zone 4: Open – This zone includes miscellaneous other open land that may have minor development with less visually obstructive features such as minor expanses of barren land, land with short scrub-shrub vegetation, cemeteries, golf courses, paved lots, playgrounds, or small emergent wetlands. This zone, often in public or semi-public locations, has a higher potential of experiencing views of a nearby project because of limited low profile features.
- Zone 5: Open Water – There are no large major lakes or ponds within the VSA. However, this zone has been included to recognize the Chateaugay River, a Nationwide Rivers Inventory (NRI) river. Other waterbodies within the VSA include the Marble River and Allen Brook.

Table 8-1 summarizes the percentage of LSZs in the VSA.

**Table 8-1. Percentage of LSZs within 2-Mile VSA**

LSZ	Foreground Distance Zone 1		Middleground to Background Distance Zone 2		Total Square Miles of LSZ	Total Percent of LSZ in VSA
	Square Miles	Percent of LSZ within the VSA	Square Miles	Percent of LSZ within the VSA		
Zone 1 – Agricultural	3.51	13.01%	8.25	30.60%	11.75	<b>43.61%</b>
Zone 2 – Forested	2.12	7.85%	10.77	39.97%	12.89	<b>47.82%</b>
Zone 3 – Developed	0.34	1.26%	1.23	4.55%	1.57	<b>5.81%</b>
Zone 4 – Open	0.08	0.28%	0.63	2.33%	0.70	<b>2.61%</b>
Zone 5 – Open Water	0.01	0.04%	0.03	0.11%	0.04	<b>0.15%</b>
<b>Totals</b>	<b>6.05</b>	<b>22.44%</b>	<b>20.91</b>	<b>77.56%</b>	<b>26.95</b>	<b>100.00%</b>

LSZ 1 Agricultural and LSZ 2 Forested are fairly co-dominant and occupy 43.61 percent and 47.82 percent of the 2-mile VSA, respectively. These two zones also occur in relatively similar percentages to each other throughout each Distance Zone as well. The occurrence of LSZ Developed drops significantly and comprises 5.81 percent of the land area in the VSA. Zone 4 Open is land with few visual obstructions such as minor expanses of barren land, land with short scrub-shrub vegetation, and emergent wetlands, and occurs in the least amount and comprises



2.61 percent of the VSA. Zone 5 Water includes very small ponds or open water emergent wetlands.

While the Chateaugay and Marble Rivers are recognized, water body calculations have not been made. However, approximately 7.7 linear miles of the Chateaugay River and 3.9 miles of the Marble River flow through the VSA.

## ***(2) The Visibility of the Facility***

A series of viewshed maps, contained in Appendix 8-1 Attachment 2, were completed to depict areas of Facility visibility within the two-mile VSA. Two analyses were completed for solar arrays: one with topography only and one with vegetation and buildings included. Areas of visibility are identified within the VIA and are further discussed below. A third viewshed analysis was produced for the proposed collection substation and is discussed in Exhibit 8 (3).

Line of Sight (LOS) analyses were completed to address state aesthetic resources of concern, fulfilling §900.2.9 (b)(1). For this Project and as noted in Table 8-4, there are five state resources within the VSA. These include NYS Snowmobile Trail C8C, the Military Trail NYS Scenic Byway (also designated as NYS Bikeway 11), and two NYS Public Fishing Rights Easements (one at Chateaugay River and one at Marble River). LOS analyses are able to provide the viewer with information that assists in examining the reasons why objects such as solar panels or collection substation components may have impeded views or no views. The underlying topography of a sight line, in addition to vegetative obstructions, can be produced, as can an estimated amount of visibility of the upper portion of an object if it is visible. LOS Profiles are located in Appendix 8-1 Attachment 4. Discussion of the profiles can be found in Exhibit 8 (c)(1).

Project simulations depicting Existing and Proposed Conditions showing leaf-on and leaf-off mitigation where proposed were produced for representative locations and can be found in Appendix 8-1 Attachment 4. Exhibit 8 (b)(4) discusses public outreach and justification for simulation viewpoint selection. Discussion of the simulations is in Exhibit 8 (c)(1).

### Viewshed Results for Arrays – Trees and Buildings Included

This analysis, per §900.2.9 (b)(1), incorporates trees and buildings in the study area in addition to topography and gives the most reasonable and realistic depiction of the surrounding

landscape. The results of this analysis provide the focus of visibility discussion because of the inherent aspects of reproducing realistic conditions when LiDAR datasets are used. When vegetation is included to present a more realistic depiction of the landscape, the viewshed analysis results in the VIA Appendix 8-1 maps show limited visibility within the VSA is expected. The general vicinity surrounding the Facility is a mosaic of well-forested and open land, as illustrated in Figure 1 Site Location and Figure 2 Landscape Similarity Zone maps in the VIA. While terrain and local relief is fairly level and does not provide much elevation change, these forested areas provide much screening and preclude many views. The majority of visibility that is expected occurs mostly in a focused location inside of the 0.5-mile Distance Zone 1, within the Facility parcels themselves, along segments of several roadways, open fields, and nearby properties within and outside the Facility Site. As seen in Figure 4 of Attachment 2 in the VIA, much of the visibility occurs on properties belonging to participating landowners on parcels within the Facility Site. Because of the maximum panel height in relation to the mature vegetation, there are minimal far-reaching views outside the general array locations. Outside Distance Zone 1, visibility is expected to be minimal to non-existent.

In summary, the viewshed analysis results in Table 8-2 show that 12.39 percent of the land area within the 2-mile VSA will have either a full or partial view of the Facility. Visibility results also indicate that 6.6 percent of the total 12.39 percent visibility within the VSA occurs on land within the Facility Site, and thus, on participating landowner properties.

**Table 8-2. Percent Visibility within Distance Zones**

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA	% VSA Visibility on Participating Landowner Property	% VSA Visibility on Non-Participating Landowner Property
Zone 1 0-0.5 Miles	6.05	2.80	46.24%	<b>10.38%</b>	-	-
Zone 2 0.5-2.0 Miles	20.91	0.54	2.60%	<b>2.01%</b>	-	-
<b>Total</b>	<b>26.95</b>	<b>3.34</b>	<b>12.39%</b>	<b>12.39%</b>	<b>6.6%<sup>1</sup></b>	<b>5.79%<sup>1</sup></b>

<sup>1</sup>6.6% of the 12.39% total visibility in the VSA occurs on lands belonging to participating landowners while 5.8% of total visibility in the VSA fall within land belonging to non-participating landowners.

### Viewshed Results for Arrays – Topography Only

Viewshed analysis with bare earth topography without trees is not recognized as being a realistic representation of potential visibility, because it is not truly reflective of the environment due to the absence of all trees. Another caveat is that the topography-only results must not be interpreted as representing visibility during leaf-off conditions, since even leaf-off bare-branched tree groups act as a solid mass where lines of sight to objects can be screened, as noted in the majority of forested area depicted in the Appendix 8-1 Facility Photolog. Despite the limitations of a topography-only analysis, it is a useful tool in understanding the influence that terrain has on blocking views to the Facility.

The bare earth topography-only viewshed analysis results show that without the presence of existing vegetation, the Facility is predominantly visible in much of the VSA within two miles. However unrealistic this result may be, it indicates that topography is fairly level within the majority of land within two miles where the terrain is not high enough to block views. The areas with no bare-earth visibility are generally associated with small river valleys of the Chateaugay and Marble Rivers and their associated tributaries or small adjacent isolated land areas that are contiguous to those streams.

### ***(3) The Visibility of Above-Ground Interconnections and Roadways to be Constructed within the Facility***

A viewshed analysis for the components of the proposed collection substation and the Point of Interconnect tap structures was completed and is included in Appendix 8-1. The taller components include two tap structures that are 65 feet and 70 feet tall, 52.5-foot-tall dead-end A-frame structures (a total of 63 feet with an additional 10.5-foot lightning mast), 52.5-foot-tall H-frame structures (a total of 64.5 feet tall with an additional 12-foot lightning mast), and one standalone 45-foot tall lightning mast within the fence line. Lower height components are 27-foot-tall breakers or those other components shorter than 27 feet such as a capacitor bank, circuit breakers, transformers and bus support structures. There will also be one 12-foot tall control building. Results show in Table 8-3 that most visibility occurs within 0.5 miles in land within the Facility Site that is already occupied by the arrays. The collection substation is sited near tree groups and is offset approximately 0.25 miles from the nearest road (County Route 23), which assists in limiting or moderation visibility despite some proposed site tree clearing. Because of various tree rows and small forested groups in the VSA, partial views of the upper

portions of the substation are expected in most areas. The substation does have an open field to the south, east, and southwest where there will be more pronounced views from County Route 23. There are also a group of non-participating residences along the road in the vicinity to the south. However, proposed solar arrays are located between the substation and the residences as well as the road, which will block views to the lower portions of the substation. Furthermore, the entire fence line at the southerly extent of the arrays, also between the substation and the residences will have proposed vegetative mitigation. This mitigation will not only screen views to the collection substation but also to the solar arrays.

There are expected views directly north of the collection substation but these are in fields adjacent to US Route 11 (also the Military Trail NYS Scenic Byway) that are otherwise infrequently occupied. Minimal to no views will be experienced along US Route 11 itself. Minimal and scattered views are expected to the northwest along Stuart Road and East Road.

The Facility Site is defined as all Facility parcels that are either owned or leased by the Applicant. Since the majority of views will occur within the Facility Site, the majority of visibility from collection substation components is falling on land already belonging to participating landowners. Moreover, Table 8-3 shows that 1.78% of the 2.78%, or more than half at 64%, of visibility coming from the collection substation is on participating landowner properties. And, despite the tall structures at the substation, far reaching views are not obtained as there are minimal to no distant views outside of 0.5 miles.

**Table 8-3. Percent Visibility of the Collection Substation within Distance Zones**

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA	% VSA Visibility on Participating Landowner Property	% VSA Visibility on Non-Participating Landowner Property
Zone 1 0-0.5 Miles	4.26	0.60	9.94%	2.23%	-	-
Zone 2 0.5-2.0 Miles	19.26	0.15	0.71%	0.55%	-	-

Distance Zone	Total Area Comprising Distance Zone Square Miles	Visibility Within Distance Zone Square Miles	% Visibility Within Distance Zone	% Visibility Within Full VSA	% VSA Visibility on Participating Landowner Property	% VSA Visibility on Non-Participating Landowner Property
<b>Total</b>	<b>23.53</b>	<b>0.75</b>	<b>2.78%</b>	<b>2.78%</b>	<b>1.78%<sup>1</sup></b>	<b>1.0%<sup>1</sup></b>

<sup>1</sup> 1.78% of the 2.78% total substation visibility in the VSA occurs on lands belonging to participating landowners while 1.0% of total substation visibility in the VSA falls within land belonging to non-participating landowners.

**(4) Appearance of the Facility Upon Completion**

To create visual simulations, Autodesk 3DS MAX 2020 (MAX) visualization software was used to correctly dimension the Facility 3D models onto the digital photographic image from each viewpoint location. A 3D model of the solar layout was created by using engineering specifications obtained from TRC, the design engineers for the Facility. The terrain elevation data (z value) needed to place the panels correctly on the surface of the earth was derived from LiDAR data sourced from 2017 NYS Federal Emergency Management Agency (FEMA) Franklin – St. Lawrence counties LiDAR dataset and obtained from the NYS GIS Program website.

Proposed grading elevations were incorporated into the model. Using the engineering site plan and LiDAR terrain surface data in GIS, each x, y, z coordinate location of each proposed solar array was obtained and imported into Autodesk 3DS MAX visualization software including the terrain surface itself. A 3D model of every proposed individual solar array was then physically constructed according to the proposed panel specifications and tilt angle along with the proposed racking system. The proposed arrays were built as bifacial single-portrait trackers with a height of eight feet, 11 inches from finished grade with the array axis oriented north-south. The simulation model was further developed to position the viewer at the selected vantage point. For a given vantage point, the visualization software is capable of providing and adjusting a camera view that matches that of the actual photograph. From the field effort, the documented camera coordinate (x, y, z) positions were entered into the model along with other camera information. The arrays were further refined within the simulation photograph by referencing point cloud LiDAR data against the landscape features seen within the photo.

For the landscaping simulations, a CAD version of the proposed landscaping plan obtained directly from the Facility Landscape Architect was imported into the MAX modeling environment where, subsequently, each proposed tree and shrub species was then translated and built into 3D, and growth heights set and placed in with the Facility along the fence line according to the landscape plan. The day and time of the photographs were also recorded and typically exist as electronic information embedded in the respective digital photograph files. This information was used to adjust for the sun angle in the simulation software in order to represent lighting conditions for the time of day and year and that which is seen in the photo.

Details on the appearance of the Facility upon completion, including size, design, colors, texture, and lighting of Facility components are included in appendices to Exhibit 5 and discussed relative to the visual impacts of the Facility in Exhibit 8(c).

The photographic simulations of the Facility are provided in the Appendix 8-1 VIA.

### ***(5) Lighting and Similar Features***

Lighting is proposed only at the Facility substation, and is only intended for security, safety, and maintenance purposes. The Facility's Lighting Plan along with the collection substation plan and profile drawing are included in the Appendix 8-1 Attachment 7 - Minimization and Mitigation Plan as Plan 7B. The Lighting Plan was developed to minimize fugitive light while meeting lighting standards established by the National Electrical Safety Code (NESC). The proposed lighting also complies with Occupational Safety and Health Administration (OSHA) requirements, as proper illumination will be provided for all working spaces around the electrical equipment. All of which has been designed so that control points or persons making repairs will not be endangered by "live parts" or other equipment.

Lights are located on such structures as the takeoff, control house, CT metering, and three pole-mounted locations – two of which are located near entries to the substation. All lighting will be activated manually and installed facing downward to minimize potential impacts to the surrounding public. Lighting has been designed to provide an average of two foot-candles, to eliminate unnecessary light trespass beyond the substation. Light fixtures will be mounted at a height not to exceed 15 feet and will not be illuminated during unoccupied periods. Full cut-off fixtures and task lighting will be used wherever feasible, as specified in the Lighting Plan.

## ***(6) Representative Views (Photographic Overlays) of the Facility***

Integrating the results of the GIS aesthetic inventory data along with the viewshed analysis results provided desktop reconnaissance for recognizing areas with potential visibility and identifying candidate locations for photosimulations. While focusing on aesthetic resources, an additional objective in the viewpoint selection process is to also choose locations for simulations that represent the various LSZs as well as Distance Zones. Further, site field visits are also necessary for ground-truthing and increasing the understanding of the visual environment.

Potential visibility, as noted by the viewshed results in Appendix 8-1 guided the candidate locations for simulation viewpoints per §900.2.9(b)(3). Results of the viewshed analysis shows the most prominent visibility is within Distance Zone 1 (0.5 miles) of the Facility, with minimal to no predicted visibility in Distance Zone 2. The majority of areas with visibility occur within the Facility Site, which is defined as parcels belonging to participating landowners. It is often difficult to obtain representative simulation photos at distance because there are often minimal locations with far reaching views of solar facilities in the northeast. Several simulations include those from aesthetic resources that have predicted visibility as a result of the viewshed analysis. As well, much of the focus for viewpoint locations are closer to the Facility where visibility is predicted near residences and segments of roadway among areas of non-participating landowners.

Representative views of the Facility include relevant front, side, and rear views of Facility components, and indicate approximate elevations as well as ensuring some representative views included the existing Jericho Rise wind turbines to assess cumulative effects. Exhibit 8 (b)(4) describes the public outreach efforts in addition to the reasoning behind the final selected simulation viewpoints within Table 8-6.

## ***(7) The Nature and Degree of Visual Change from Construction of the Facility and Above-Ground Interconnects***

Potential visibility of construction activities is anticipated to be temporary in nature. Construction of a typical facility normally involves the following major undertakings: building/upgrading roads; constructing laydown areas; removing necessary vegetation from areas of construction; transporting components and other materials and equipment to the Facility Site; assembling the solar panels; constructing other Facility components (e.g., collection substation, fences); and installing power-conducting cables (typically buried). During this time, there will be an increase

in vehicular traffic, equipment, and workers seen within the Facility Site and the immediate surrounding area; construction may result in the temporary increase of dust and emissions.

Construction visual contrasts would vary in frequency and duration throughout the course of construction. There may be periods of intense activity followed by periods with less activity and associated visibility would vary in accordance with construction activity levels.

The peak construction workforce for this Facility is expected to be approximately between 78 and 117 workers which will be distributed to/from the Facility Site, conservatively assuming one worker per vehicle per day. In addition to construction workforce trips for each type of construction and grading equipment and material delivery trips for the construction period estimated to be 69 trips.

Earthwork activity, construction of haul roads, and fencing installation will not occur at the same time as the peak workforce and equipment installation construction period. Added trips for these activities are expected to be approximately 15 trips per day during the first three months and 18 trips per day during the final two months.

Construction hours are to be limited to 7 a.m. to 8 p.m., Monday through Saturday, and 8:00 a.m. to 8 p.m. on Sunday and national holidays, with the exception of construction and delivery activities, which may occur during extended hours beyond this schedule on an as-needed basis. The actual time of day and day of the week for the delivery/removal of any cut and fill as will the delineation of approach and departure routes will be determined when the construction schedule is finalized.

There will also be temporary stockpiles, and stormwater management, and erosion control measures in place during construction activities. Further detail on expected number of trip and specific construction activity and equipment can be found in Exhibit 16.

### ***(8) The Nature and Degree of Visual Changes from Operation of the Facility and Above-Ground Interconnects***

The information in the Appendix 8-1 VIA provides an understanding of the visual relationship between the Facility and its surrounding context. The following provides a summary of findings and impacts related to the Facility.



- The viewshed analysis results objectively show that there is minimal expected visibility of solar arrays (12.39%) within the overall VSA and there would be limited areas from which the Facility would be visible but, in contrast, a multitude of areas from which it would not be seen.
  - The VSA was partitioned into two distance zones each offering its own level of visual acuity. These zones include Zone 1 from 0 to 0.5 miles and Zone 2 from 0.5 to two miles. Zone 1 had the highest percentage of visibility of 10.38%, while there is an abrupt difference once outside the 0.5-mile radius where percent visibility in the VSA drops to 2.01%. This can be expected as there would reasonably be a concentrated amount of visibility in proximity to the Facility. Visible areas include the Facility parcels themselves and at a few roadways, open fields, and nearby properties. Although the panels are sited in open land, the low-profile panels set against existing tree buffers, hedgerows, and tree groups that frame the panel locations is enough to obscure many outward views.
  - There are five LSZ categories presented. The presence of the highest LSZ percentages within the VSA are Zone 2 Forested at 47.82% and Zone 1 Agricultural and 43.61%.
  - As noted in Table 8-2, majority of visibility for the arrays occurs on properties belonging to participating landowners. The Facility Site consists of 1,471 acres or 2.3 square miles. The Facility Site is described as an acreage area encompassing all Facility parcels located within the Towns of Burke and Chateaugay. It is composed of land that currently is either leased or owned by the Applicant and is therefore, defined as properties belonging to participating landowners. Visibility results also indicate that 6.60% of the total 12.39% visibility within the VSA occurs within the Facility Site, and thus, on participating landowner properties. The remaining 5.79% of Facility visibility will occur on non-participating landowner parcels.
- Due to the placement and surrounding forested areas, visibility analysis shows that the collection substation will not be visible from most areas in the vicinity as well as within the overall VSA. Exhibit 8(a)(3) discusses visibility solely from collection substation components in the absence of arrays. Highest electrical components are between 45

and 70 feet tall while lower components are 27 feet or less. Substation visibility occurs in 2.78% of the land area within the VSA.

- Three listed recreational aesthetic resources outlined in Table 8-4 will have views of the Facility and includes short segments of a state snowmobile trail designated as C8C and the Military Trail NYS Scenic Byway/NYS Bikeway 11 (US Route 11). Both run through Burke and Chateaugay. These are linear features that by nature will experienced intermittent, transient, and partial views of arrays. Snowmobile travel will be seasonal. Two NRHP eligible historic sites are expected to have partial views. In a letter dated January 11, 2022, SHPO provided a final conclusion stating that the Brookside Facility will have No Adverse Impact to historic and cultural resources (see Appendix 8-1, Attachment 5).
- The local community will experience partial views of the Facility. Several segments of local roadways running through the interior of the Facility as well as perimeter roads may experience transient views from vehicular traffic. Much of this visibility along intermittent road segments are within 0.5 miles in Distance Zone 1 and include those such as US Route 11, County Route 23, County Route 33, Cemetery Road, East Road, Ketchum Road, Lewis Road, Martin Road and others noted in Exhibit 8(a)(10). Entire roads will not have visibility. Visibility maps in Appendix 8-1 further illustrate which segments of road may experience views of the Facility.

It is expected that the number of static (longer duration) viewers able to see the Facility is low due to the rural nature of the Facility location and lack of high-density residential clusters and neighborhoods as compared to a suburban or urban area. Most residences are rural residential located intermittently along roadways, save for Thayer Corners. The Villages of Chateaugay and Burke are not predicted to see the Facility. Also, the presence of mosaicked tree groups along with relatively level terrain in the area assists in screening views. However, there will be house locations with long duration views. The Facility Landscape Plan was designed to screen views of the Facility to the maximum extent practicable for adjacent and nearby residences. Views at several nearby residences along these roads are represented in the Facility photosimulations.

- Appendix 8-1 Attachment 4, per §900.2.9 (b)(1), shows four LOS profiles from state aesthetic resource and illustrate how or why the Facility is visible or not visible. Two LOS

profiles, L1 and L4 will have views from NYS Snowmobile Trail C8C and the Military Trail NYS Scenic Byway/NYS Bikeway 11, respectively. Two NYS Public Fishing Rights Easement locations, L2 at the Chateaugay River and L3 at Marble River will not have views of the Facility.

- Photosimulations showing existing and proposed conditions including proposed mitigation at 10 years have been produced. New shapes and colors incongruous to the existing environment are introduced. The general visual appearance of the low-profile panels as a group contribute to a homogenous form, which consists of new horizontal pattern often similar in shape, and size to the landscape features found in many views. Overall Facility contrast and the overall visual effect will vary depending on the extent of panel visibility (partial or full), distance of the arrays from the viewer, and if the panels are seen in the context of other existing noticeable modifications to the local natural landscape. In some instances, background vegetation seen behind the Facility moderates visual contrast because the arrays are perceived to be visually absorbed by similar color and color value expressed by the background trees. In other instances, depending on weather and seasonal conditions, contrasts appear greater. It is observed in several of the simulations that offset distances from a viewer or roadway are effective in moderating the effects of the Facility where size and scale as well as discernible detail are diminished. Mitigation of the Facility is emphasized at residential properties.
- A discussion of Facility visual contrasts in greater detail can be found in Exhibit 8 (c)(3). Facility contrast ratings were applied for the unmitigated simulations against existing conditions. Seven simulations had average Part 1 Facility contrast ratings that are weakly moderate to moderate. Three simulations are rated as having weak or very weak contrasts. All Part 2 average viewer sensitivity contrasts are rated as weak or weakly moderate due to the low populated rural nature of the area, despite some simulation viewpoints located at aesthetic resources. Contrasts noted above are averaged within each Part. Please refer to Appendix 8-1 to see the raw values assigned for each subcategory under each Part.

Proposed mitigation to screen views can be seen in the simulations and show a 10-year time frame. With the inclusion of the landscape plantings, contrasts are softened and moderated as the trees and shrubs are more congruous with the existing environment and the Facility color and value contrasts are reduced.

- Proposed landscaping is described in Exhibit 8 (d)(8) and will consist of two planting template schemes, each with a variety of evergreen trees and shrubs that will provide year-round screening. Visual Facility contrast from solar panels is anticipated to be avoided or minimized in areas where landscaping is proposed. The Applicant proposes approximately 26,145 linear feet of vegetative mitigation at or near residential properties.

Other factors informing the degree of visual change resulting from Facility operation include:

- Arrays are set back from property lines and/or behind forested areas resulting in reduced visibility.
- Because a tracker racking system will be employed, panels will not appear at maximum tilt at all times. During the middle portion of the day the panels will lean towards a shorter more horizontal aspect as the panels track the sun.
- The Alternating Current (AC) collection lines will be placed underground and installed primarily via direct burial or trenching with some portions to be proposed via horizontal directional drilling (HDD) in order to avoid wetland resources and roadways.
- While the Facility area consists of many pastoral views, landscape features are similar to each other and landscape characteristics are typical of what you would find in a rural area in this part of New York. The Facility will not impair these surrounding regional landscape characteristics.
- The Facility will not always appear as a dominant feature in a view within the VSA.
- There will be no interference with the general enjoyment of recreational resources in the area due to the fact that most visual resources are at a distance from the Facility or they are linear features (roads and snowmobile trails) running through the area and are expected to have intermittent and short-duration views. There is limited to no long-range visibility overall in the VSA.
- The Applicant has employed reasonable mitigation measures to the maximum extent practicable with respect to the overall design and layout of the proposed Facility as well as the proposed vegetative plantings that screens views to nearby residents.

- The vertical scale of solar arrays is typically not an issue in relation to surrounding features such as trees, hills, and barns. Lateral extent may be an issue if the arrays appear to overwhelm a ridgeline, scenic water body, or cultural feature that appears diminished in prominence. The Facility solar arrays, considering their layout, spacing and the topography and resources in the area, do not overwhelm such physical geographic areas.
- Visual clutter often is adversely perceived and commonly results from the combination of human-made elements in close association that are of differing shapes, colors, forms, patterns, or scales. Generally, solar facilities offer simple and uniform or geometrically patterned arrays or groupings that may be more visually consistent than mixed types and sizes of objects. Landscape mitigation also assists in diminishing visual clutter and offering consistency to the view.
- Aside from normal low local road traffic, the public areas in the vicinity to the Facility Site with predicted visibility are not exceedingly high-use destination areas.
- The Facility does not have an adverse effect on a known listed scenic vista.
- The Facility does not damage or degrade existing scenic resources.
- The Facility does not create a new source of substantial light that would adversely affect nighttime views in the area. Potential glare from the solar modules and associated equipment would be negligible because they would consist of a non-reflective coating, when possible.

***(9) The Related Operation Effects of the Facility***

The Applicant prepared a Glint and Glare Analysis, included as Plan 7C in the Appendix 8-1 Minimization and Mitigation Plan (Attachment 7), to identify any potential glint/glare impacts on nearby residences at first and second-story viewing heights, as well as roadways at car and truck viewing heights. The analysis was prepared by Capitol Airspace Group using the Solar Glare Hazard Analysis Tool (SGHAT).

The results of the analysis indicate that there are no predicted glare occurrences for nearby residences or roadways as a result of the proposed single-axis tracking arrays. The results are

based on the application of Federal Aviation Administration (FAA) glint and glare standards in the absence of non-aviation regulatory guidelines. Panels are designed to absorb sunlight and will be treated with anti-reflective coatings that will absorb and transmit light and reduce reflection. In general, solar panels are less reflective than window glass or water surfaces (NYSERDA, 2019) and any reflected light from solar panels will have a significantly lower intensity than glare from direct sunlight (Massachusetts Department of Energy Resources, 2015).

In cooperation with the Department of Energy (DOE), the FAA developed and validated the Sandia National Laboratories SGHAT, now licensed through ForgeSolar. ForgeSolar has enhanced the SGHAT for glare hazard analysis beyond the aviation environment. These enhancements include a route module for analyzing roadways as well as an observation point module for analyzing residences. SGHAT is a very conservative tool in that:

- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover, and geographic obstructions.
- The glare analysis assumes clear, sunny skies for 365 days of the year and does not take into account meteorological conditions that would nullify predicted glare such as clouds, rain, or snow.
- Although only a portion of a modeled array may have the potential to produce glare, the results are provided as if the receptor has visibility of the entire array. SGHAT does not account for the mutual screening of panels, i.e., front panels that screen the view of other rear panels.

### ***(10) Visual Resources Affected by the Facility***

An inventory of publicly available and accessible local, county, state, and federally recognized visual resources out to the 2-mile VSA was compiled according to §900-2.9 (b)(4)(ii). GIS data, town, county, and agency reports, topographic data, and site visits along with photographic documentation were used as source data. Also, on June 22, 2021, an information request was sent out to stakeholders per §900-2.9 (b)(4). In this request, preliminary visual data was provided, indicating the extent and findings of visibility studies at that point in time, which included identified visual resources and a Facility Photolog. Opportunity was provided for

stakeholders to append additional visual resources of concern to the inventory and/or choose or add photographs for Facility visual simulations. Prior and following the June 22, 2021 information request, the Applicant engaged with stakeholders, including groups and individuals with a potential interest in the Facility, as fully described in Exhibit 8 (b)(4).

Per §900-2.9 (b)(4)(ii), the following have been reviewed for their appearance within the VSA:

1. Landmark landscapes,
2. Wild, scenic or recreational rivers administered by NYSDEC, Adirondack Park Agency (APA) or United States Department of the Interior (USDOI),
3. Forest preserve lands,
4. Scenic vistas specifically identified in the Adirondack Park State Land Master Plan,
5. Conservation easement lands,
6. Scenic byways designated by the federal or state governments,
7. Scenic districts and scenic roads, designated by the Commissioner of Environmental Conservation,
8. Scenic Areas of Statewide Significance,
9. State parks,
10. Historic sites listed or eligible on the National/State Registers of Historic Places,
11. Areas covered by scenic easements, public parks or recreation areas,
12. Locally designated historic or scenic districts and scenic overlooks, and
13. High-use public areas.

Table 8-4 shows results of the investigatory findings of municipal village/town, or agency listed and recognized scenic resources that are required by the regulations set forth for 94-c.

Appendix 8-1 Attachment 2 mapping show resulting resource locations.

Table 8-4. Inventory of Visual Resources within the 2-Mile VSA

Map ID <sup>1</sup>	Resource Name	Town/Village	Approximate Distance to Fence Line	LSZ	Federal (F), State (S), or Local (L) Resource	Potential Visibility <sup>2</sup>
<b>Recreation</b>						
1	High Falls Park & Campground	Chateaugay	0.8 miles	2, 3	L	No
2	Chateaugay Central School & Playing Fields	Village of Chateaugay	1.5 miles	3, 4	L	No
3	Chateaugay Town Recreation Park	Chateaugay	1.5 miles	3, 4	L	No
4	Sellers Field	Burke	1.8 miles	2, 4	L	No
N/A	NYS Snowmobile Trail C8C	Burke, Chateaugay	642 feet	1, 2	S	Yes
<b>NYS Scenic Byways</b>						
N/A	Military Trail NY Scenic Byway (also designated as NYS Bike Route 11)	Burke, Chateaugay	360 feet	1, 3	S	Yes
<b>Nationwide Rivers Inventory</b>						
N/A	Chateaugay River	Chateaugay	424 feet	5	F	No
<b>NYS Public Fishing Rights</b>						
N/A	Various locations Chateaugay River	Chateaugay	0.8 miles	5	S	No
N/A	Various locations Marble River	Chateaugay	1.5 miles	5	S	No

Map ID	USN	Resource Name	Distance (Miles)	Address	Town/Village	Potential Visibility
<b>NRHP Eligible Historic District <sup>3,4</sup></b>						
	03345.000065	Chateaugay Village Historic District	1.4 miles		Village of Chateaugay	No
<b>NRHP Eligible Historic Site <sup>3,4</sup></b>						
A	03307.000043	Ridgeway Cemetery	1.7	Cook Road	Burke	No
B	03307.000045	Bova House	0.2	5717 Rt 11	Burke	Not Likely
C	03307.000046	Thayer Corners Cemetery	0.7	Route 11	Burke	No
D	03307.000047	Mitchell Cemetery	1.4	Montgomery Road	Burke	No
E	03307.000051	Burke Center Presbyterian Church	2.0	263 route 34	Burke	No



Map ID	USN	Resource Name	Distance (Miles)	Address	Town/Village	Potential Visibility
F	03307.000052	St. George's Cemetery	2.1	3CR 23 at Pikeville Rd	Burke	No
G	03307.000055	474 Jamison Line Road	1.8	474 Jamison Line Road	Burke	Not Likely
H	03308.000001	Chateaugay River Tunnel	0.8	Cemetery Road	Chateaugay	No
I	03308.000017	Farm complex	0.5	162 Cemetery Road	Chateaugay	No
J	03308.000068	165 Cemetery Road	0.5	165 Cemetery Road	Chateaugay	No
K	03308.000070	St. Patrick's Cemetery	0.6	294 Cemetery Road	Chateaugay	Yes
L	03308.000072	528 Hartnett Rd	1.2	528 Hartnett Road	Chateaugay	No
M	03308.000075	Eastside Cemetery	2.1	7780 Route 11	Chateaugay	No
N	03308.000079	Atwater Cemetery	376 feet	Martin Road	Chateaugay	No
O	03308.000081	Brayton Hollow Cemetery	0.5	CR 35	Chateaugay	No
VB	03344.000001	Bungalow	1.6	29 Mill Street	Village of Burke	No
VB	03344.000002	Queen Anne w/ tower residence	1.6	26 Mill Street	Village of Burke	No
VB	03344.000003	Queen Anne residence	1.6	9 Mill Street	Village of Burke	No
VB	03344.000004	Brick Italianate residence	1.7	1031 West Main Street	Village of Burke	No
VB	03344.000005	Burke United Methodist Church	1.7	1027 West Main Street	Village of Burke	No
VB	03344.000007	Burke Town Hall / I. O. O. F.	1.6	842 Depot Street	Village of Burke	No
VB	03344.000008	1046 East Main Street	1.6	1046 East Main Street	Village of Burke	No
VB	03344.000009	1052 East Main Street	1.6	1052 East Main Street	Village of Burke	No
VB	03344.000011	1033 West Main Street	1.7	1033 West Main Street	Village of Burke	No
VB	03344.000012	1035 West Main Street	1.7	1035 West Main Street	Village of Burke	No
VC	03345.000002	Rutland Railroad Depot	1.5	45 Depot Street	Village of Chateaugay	No
VC	03345.000004	Chateaugay Town Hall and Library	1.6	191 East Main Street	Village of Chateaugay	No

Map ID	USN	Resource Name	Distance (Miles)	Address	Town/Village	Potential Visibility
VC	03345.000066	St. Patrick's Church	1.4	130 West Main Street	Village of Chateaugay	No
VC	03345.000067	St. Patrick's Church Rectory	1.4	132 West Main Street	Village of Chateaugay	No
VC	03345.000068	Key Bank	1.5	151 West Main Street	Village of Chateaugay	No
VC	03345.000069	Jackson Building	1.5	160 East Main Street	Village of Chateaugay	No
VC	03345.000070	Beeman Block	1.5	161 East Main Street	Village of Chateaugay	No
VC	03345.000071	163 East Main Street	1.5	163 East Main Street	Village of Chateaugay	No
VC	03345.000072	165 East Main Street	1.5	165 East Main Street	Village of Chateaugay	No
VC	03345.000073	167 East Main Street	1.5	167 East Main Street	Village of Chateaugay	No
VC	03345.000074	169 East Main Street	1.5	169 East Main Street	Village of Chateaugay	No
VC	03345.000075	171 East Main Street	1.5	171 East Main Street	Village of Chateaugay	No
VC	03345.000076	173 East Main Street	1.5	173 East Main Street	Village of Chateaugay	No
VC	03345.000077	181 East Main Street	1.6	181 East Main Street	Village of Chateaugay	No
VC	03345.000078	183 East Main Street	1.6	183 East Main Street	Village of Chateaugay	No
VC	03345.000079	Chateaugay Hotel	1.5	2 Depot Street	Village of Chateaugay	No
VC	03345.000080	Johnson Brothers Building	1.6	194 East Main Street	Village of Chateaugay	No
VC	03345.000081	196 East Main Street	1.6	196 East Main Street	Village of Chateaugay	No
VC	03345.000082	McCoy Building	1.5	3 River Street	Village of Chateaugay	No
VC	03345.000083	14 Lake Street	1.5	14 Lake Street	Village of Chateaugay	No
VC	03345.000084	16 Church Street	1.6	16 Church Street	Village of Chateaugay	No
VC	03345.000085	20 Church Street	1.7	20 Church Street	Village of Chateaugay	No
VC	03345.000086	23 Depot Street	1.5	23 Depot Street	Village of Chateaugay	No
VC	03345.000087	36 Depot Street	1.5	36 Depot Street	Village of Chateaugay	No
VC	03345.000088	43 Depot Street	1.5	43 Depot Street	Village of Chateaugay	No

Map ID	USN	Resource Name	Distance (Miles)	Address	Town/Village	Potential Visibility
VC	03345.000089	5 Franklin Street	1.7	5 Franklin Street	Village of Chateaugay	No
VC	03345.000090	6 Franklin Street	1.7	6 Franklin Street	Village of Chateaugay	No
VC	03345.000091	94 West Main Street	1.3	94 West Main Street	Village of Chateaugay	No
VC	03345.000092	First Presbyterian Church	1.7	214 East Main Street	Village of Chateaugay	No
VC	03345.000093	Smith Green Cemetery	2.0	299 East Main Street	Village of Chateaugay	No
VC	03345.000094	United Methodist Church	1.6	5 Church Street	Village of Chateaugay	No
<b>July 2021 Historic Architectural Survey Additional Recommended NRHP Eligible Sites<sup>5</sup></b>						
P	N/A	1207 County Route 23	0.9	1207 County Route 23	Burke	Not Likely
Q	3307.000044	15 East Road	0.27	15 East Road	Burke	Likely
<p><sup>1</sup> Map ID refers to map identification of visual resources as seen in Appendix 8-1 Attachment 2 mapping.</p> <p><sup>2</sup> Potential visibility is obtained from the viewshed analysis using topography, trees, and buildings only, per §900.2.9(b)(1).</p> <p><sup>3</sup> There are no listed NRHP or NYS historic sites based on a February 2021 New York's State Historic Preservation Office (SHPO) request for information.</p> <p><sup>4</sup> All historic sites in the study area have been assigned a (national) NRHP eligibility status.</p> <p><sup>5</sup> Based on the Facility historic architectural survey conducted within the Area of Potential Effects, which was determined to be two miles. Survey was conducted in July 2021. Refer to Exhibit 9 for full details</p>						

Information for historic sites and districts, NRHP, and eligible historic properties was obtained by accessing the NY Cultural Resources Information System website and by direct contact with the New York's State Historic Preservation Office (SHPO) as part of a specific Applicant request made in February 2021. In July 2021, a historic architectural survey was conducted by TRC on behalf of the Applicant. The purpose of the survey was to identify the presence of historic architectural properties aged 50 years or older within the Area of Potential Effects (APE), evaluate these architectural resources for their eligibility for listing in the NRHP, and provide an assessment of potential effects of the Facility on those resources that are listed in, previously determined eligible for listing in, or recommended eligible for listing in the NRHP.

The results of that survey as well as the SHPO request, indicate there are currently no NRHP listed sites within the VSA and thus no visual impacts to listed historic sites to assess. There are however, NRHP eligible historic sites as outlined in Table 8-4 and consists of those sites

currently listed as a federally NRHP eligible historic site as well as those newly identified or recommended historic resources as a result of the historic architectural survey.

TRC Architectural Historians ultimately recommends two new historic sites as NRHP eligible. One previously determined not eligible at 15 East Road is now recommended as NRHP eligible. And one newly identified architectural resource is recommended as NRHP eligible at 1207 County Road 23.

While the table indicates potential visibility with several historic locations, SHPO concludes in a letter dated January 11, 2022, that the Facility will have No Adverse Impact to historic and cultural resources (Appendix 8-1, Attachment 5). Please refer to Exhibit 9 of the Application as well as the Historic Architectural Resources Survey and Effects Report for greater detail on the cultural resources investigations and results.

### **Visibility of Solar Arrays at Identified Resources with Predicted Visibility**

Results of the viewshed analysis using trees and buildings and as presented Appendix 8-1 mapping indicates that the resources listed in Table 8-4, per the 94-c guidelines, which have predicted visibility of the Facility include:

- Military Trail NYS Scenic Byway (includes NYS Bikeway 11)

The Military Trail NYS Scenic Byway is an 84-mile roadway consisting of US Route 11 and connects Rouses Point and Massena. Historically, it was used by the military to transport troops and equipment between the Saint Lawrence Seaway and Lake Champlain. The trail now offers multi-use recreation and scenic views. US Route 11 and the Military Trail is also recreational NYS Bikeway 11.

The Military Trail is a main east-to-west thoroughfare running through the center of the Facility. This route passes by several array groups in Chateaugay and Burke. Approximately 5.6 miles of US Route 11/Military Trail runs through the VSA. However, approximately one mile of US Route 11 will experience visibility in Chateaugay and 0.5 miles in Burke. Several various views along this trail can be found in the Appendix 8-1 Facility Photolog. VP4 and VP33 from the Facility Photolog have been developed as simulations to represent proposed views from this road and are described in Exhibit 8 (c)(1).

- NYS Snowmobile Trail C8C

NYS Snowmobile Trail C8C, maintained by the Franklin Snowmobilers Club, runs in a general east-west orientation south of the arrays in the vicinity of the Distance Zone 1 0.5-mile extent. The trail runs near Jerdon Road over to Selkirk Road and then continues westerly to the Village of Burke as it parallels County Route 23 on the southern side. The majority of the snowmobile trail do not have views. However, several views that will occur will be transient, intermittent, and of short duration. VP39 in the Appendix 8-1 Facility Photolog located in an area of potential visibility shows the nature of the snowmobile trail at the intersection of Jerdon Road and County Route 33 in Chateaugay. VP23 on Selkirk Road in Burke is also in an area of predicted visibility and was selected as a representative view toward the Facility at a location from the snowmobile trail. VP23 simulation is approximately 0.4 miles from arrays and shows how the Facility appears at distance with a Jericho Rise wind turbine in the view.

### Historic

There are no listed NRHP sites in the VSA. However, there are several NRHP eligible historic sites. The following describes potential views from those NRHP eligible historic sites located in areas of predicted visibility:

- 15 East Road, Thayer Corners, Burke

This is a circa-1856, two-story, Greek Revival-style home with noteworthy style and features that sandstone exterior cladding on every elevation exception for the north elevation, which has aluminum siding. The resource was previously determined not eligible for NRHP listing. However, the resource is now recommended eligible for NRHP listing under Criterion C. Criterion C is where a property must embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.

The resource employs notable features of Greek Revival-style architecture, including gable-end returns. The house also retains its sandstone exterior cladding. The main block retains a high degree of integrity in materials, workmanship, and design. The side addition does not compromise the integrity of the original house. No evidence points to any resident of this house

being noteworthy in local, state, or national events. The setting is not a contributing feature to the property nor does the property contribute to any nearby historic district.

Partial views may be experienced within the property boundary from the arrays located at the northern section of the Facility. VP44 was chosen as a representative view looking toward the Facility from East Road in the vicinity of the house.

- Bova House, 5717 US Route 11, Thayer Corners, Burke

This is a circa-1856, two-story Greek Revival-style home with noteworthy style and features that include stone exterior walls. The resource was previously determined eligible for NRHP listing under Criterion C. Investigation of the site suggests this determination should remain intact. While there is predicted visibility at this location as a result of the viewshed analysis, site visits and VP45 in the Appendix 8-1 Facility Photolog suggests that the Facility will not be seen from this location.

- St. Patrick's Cemetery, Cemetery Road, Chateaugay

Established in 1844, Saint Patrick's Cemetery has noteworthy historical associations. The resource was previously determined eligible for NRHP listing under criteria A and C. Investigation of the site suggests this determination should remain intact. Criterion A is where a property must be associated with events that have made a significant contribution to the broad patterns of our history. Criterion C definition is mentioned previously.

Predicted visibility results suggests that the property will likely have a partial view of the Facility. VP5 was chosen for a representative view of the Facility from this cemetery location.

- 474 Jamison Line Road, Burke

This is a farm that consists of a circa-1850, one-and-a-half-story, vernacular-style farmhouse and a three-gable ground barn. It is noteworthy as intact example of a nineteenth-century farm. The resource was previously determined eligible for NRHP listing under Criterion C. Investigation of the site suggests this determination should remain intact.

Visibility analysis results suggests that the property may have views of the Facility. However, because the property is approximately 1.8 miles northwest of the northwesternmost portion of the Facility Site, the introduction of Facility elements will be indistinct, if visible at all, from the

property itself. Based on field observations, views from the resource toward the Facility are obscured (screened) by intervening vegetation between the Facility and this historic property. The Facility will have no visual impact on the property's historic setting or features that would diminish the property's NRHP qualifying characteristics. A similar vantage point, landscape position and zone, and distance to arrays can be obtained from VP42 (see Appendix 8-1 Facility Photolog), which is in the vicinity at East Road.

- 1207 County Route 23, Burke

This location is identified as a newly identified historic resource resulting from the architectural survey conducted by the Applicant that is recommended eligible for NRHP. It is composed of a one-and-a-half-story, front-gable main block and a one-story, side-gable, side (southwest) addition. The main block features exposed sandstone walls. The addition rests on a stone foundation and is clad with vinyl siding. The roofs of both masses are covered with standing-seam metal. The main block features gable-end returns, a signature feature of Greek Revival-style architecture. The resource employs notable features of Greek Revival architecture, include gable-end returns, as well as sandstone exterior walls. The house retains a high degree of integrity in materials, workmanship, and design. No evidence points to any resident of this house being noteworthy in local, state, or national events. The property does not contribute to any nearby historic district. The resource is recommended eligible for NRHP listing under Criterion C.

While there is predicted visibility at this location as a result of the viewshed analysis, site visits and VP53 in the Appendix 8-1 Facility Photolog suggests that the Facility will not be seen from this location, as proposed arrays are located beyond the wooded area seen in the very distant background. It is assumed only a glimpse of the panels might be possible from the site distance of 0.86 miles and would likely blend in amongst the intervening trees.

### **Visibility of Solar Arrays at Local High Use Resources**

Local scenic resources are those locations that are officially listed or designated in an adopted comprehensive or master plan. Those local resources that have been recognized by document research and/or were received as a response from the outreach program described in Exhibit 8 (b)(4) are listed in Table 8-4. There are no designated local scenic resources listed in Table 8-4 that will have views of the Facility.

However, not classed specifically as officially listed agency scenic resources, it is recognized that local town residents and local roadway traffic will experience views of the Facility in varying locations.

In addition to Figure 4 viewshed results in Appendix 8-1 Attachment 2, and to further elucidate areas of visibility, an aerial photo map series in Appendix 8-1 Attachment 3 provides large-scale zoomed in predicted visibility at all photolog viewpoints. Photos in the Photolog depict many views. Many of the viewpoint locations are along roadways at nearby residences. Several segments of local roadways running through the interior of the Facility as well as perimeter roads may experience transient views from vehicular traffic. Most of this visibility along intermittent road segments are within 0.5 miles in Distance Zone 1.

#### Roads Within Distance Zone 1 of 0.5 Miles

- US Route 11. US Route 11 is a main east-to-west thoroughfare running through the center of the Facility and is classed as Principal Arterial Other. These types of roads are non-interstate and consist of a connected rural network of continuous routes. It is also designated as the Military Trail NYS Scenic Byway and NYS Bikeway 11. This route passes by several array groups in Chateaugay and Burke. Approximately one mile of US Route will experience visibility in Chateaugay and 0.5 miles in Burke. VP4 and VP33 from the Appendix 8-1 Facility Photolog have been developed as simulations to represent proposed views from this road.
- County Route 23. County Route 23 runs east to west through both Chateaugay and Burke near the southern portion of the Facility. It departs from US Route 11 near the Chateaugay River and leads to the Village of Burke. Approximately 1.6 miles of the road will have visibility of arrays in Chateaugay and 1.1 miles in Burke. VP38 and VP46 along this road have been developed for Facility simulations.
- County Route 33. County Road 33 is located at the southeast portion of the Facility in Chateaugay and runs in north-south fashion, diverging from County Road 23. Approximately 0.25 miles of this road is predicted to experience visibility of the Facility in the area at the intersection with County Road 23. VP7 located at the junction with County Route 23 has been developed as a Facility simulation.



- Cemetery Road. Cemetery Road runs north to south at the eastern side of the Facility in Chateaugay. Two sections of the road are predicted to have views of the Facility consisting each of 700-foot and 1,300-foot linear segments. VP5 at St. Patrick's cemetery, an NRHP eligible historic site located at the northern part of this road has been developed as a Facility simulation.
- East Road. This road runs in a north-south direction in Burke and lies near the northwestern portion but west of the Facility. Two intermittent road segments of approximately 1,000 feet and 0.5 miles may experience partial visibility between Lewis Road and US Route 11. VP44 in the vicinity of an eligible historic site in the Thayer Corners area has been developed as a Facility simulation. VP9 a little further north has also been developed as a simulation.
- Ketchum Road. Ketchum Road is located west of the southwestern section of the Facility in Burke. Approximately 0.35 miles of the roadway between US Route 11 and County Route 23 may have partial views of the Facility. VP8 in the Facility Photolog is a representative view from Ketchum Road.
- Lewis Road. Lewis Road is located in Burke and Chateaugay and lies between East Road and US Route 11. The road in Burke branches off East Road north of the Facility running east into Chateaugay where it meets with the Chateaugay River and then curves south to US Route 11. Approximately 0.25 miles of road segment in Chateaugay may likely see the Facility where the road passes by arrays close to and at the intersection with US Route 11. VP13 along this road segment has been developed into a Facility simulation.
- Martin Road. Martin Road in Chateaugay passes by arrays in the northeast section of the Facility. It lies between Lewis Road and the town boundary with Burke. Two road segments consisting of several hundred feet are predicted to have views of arrays. VP15 in Burke can be considered similar and a representative view from this road.
- Selkirk Road. Selkirk Road runs north-south and is an extension of Ketchum Road when it is south of County Route 23. The road is to the southwest of the Facility adjacent to open farmland where approximately 0.35 miles of road segment may experience views

of arrays. VP23 is a representative view from this road and has been developed into a Facility simulation.

- Stuart Road. Stuart Road is in Burke and runs diagonally between East Road and the town boundary with Chateaugay. This road passes by open fields with arrays where approximately 0.70 miles of road segment will have views of the Facility. VP14 and VP15 are representative views from the road.

#### Roads Between Distance Zone 1 (0.5 Miles) and Distance Zone 2 (Two Miles)

- Cook Road. Cook Road is in Burke approximately 1.4 miles south of the Facility. A 400-foot road segment may have partial visibility of the Facility at a portion of road near the town boundary with Chateaugay. Coveytown Road at the intersection with County Route 29 in this area may also have views. VP22 is a representative view from this road.
- County Route 29. County Route 29 runs in a north-south orientation and is located west of the Facility in Burke. A discrete area of farmland including approximately 0.4 miles of road segment may have visibility of the Facility. This farmland and road segment is near the extents of the VSA, approximately 1.75 miles northwest of the northernmost arrays.
- Montgomery Road. This road extends in a north-south direction from County Route 29. It is in Burke west of the Facility, approximately 1.2 miles from the westernmost arrays. Approximately 500 feet of road segment may have a view through open ag lands.
- Sargent Road. Sargent Road is a short dead end road off of Selkirk Road that runs through open farmland. The road is 0.7 miles south of the southwestern arrays where approximately 0.25 miles of road may have a view of the Facility.

Mentioned above, the majority of Facility visibility along East Road, County Route 23, and Selkirk Road occurs within Distance Zone 1 of 0.5 miles. However, segments of County Route 23 and Selkirk Road have areas of visibility of 1.2 miles and 0.2 miles respectively, that contiguously extend beyond 0.5 miles into Distance Zone 2. VP24 is a representative view outside of 0.5 miles. While East Road has most visibility within 0.5 miles there is an additional road segment consisting of 0.5 miles at the northern extents of the VSA that may have visibility of the Facility. VP42 in the Facility Photolog is a representative view from this area.

### Populated Areas

A higher density of development occurs in the Villages of Chateaugay and Burke. Predicted visibility mapping indicates that these two populated areas are not expected to see the Facility. VP16, 17, and 18 in the Appendix 8-1 Facility Photolog are representative views from the Village of Chateaugay, while VP25 is a representative view within the Village of Burke.

Other minor civil divisions include Thayer Corners, Brayton Hollow, Burke Center, and Cooks Mill. Thayer Corners is a neighborhood along U.S. Route 11 and East Road/Ketchum Road where partial and variable visibility may result. For example, VP45 within the Facility Photolog indicates no visibility.

There is no predicted visibility at Brayton Hollow, Burke Center (north of the Village of Burke), or Cooks Mill. VPs 11, 26, and 49 in the Facility Photolog provide representative views of these areas, respectively.

### **(11) Cumulative Effects**

Per §900.2.9 (a) a cumulative visual impact analysis should be performed but it is not specific. Cumulative effects are discussed in this Exhibit based on available data, related to recent and proposed development in the Towns. Please refer to Figure 6 of Appendix 8-1, Attachment 2 for project locations. Aside from the proposed Facility there are seven other renewable energy projects in the area that are either existing or have been proposed.

The VIA lists publicly known proposed land uses in the area. They are:

- a 5-MW solar facility by Nexamp Solar located south of US Route 11 off of Ketchum Road in Burke.
- Glengarry Solar Project, an AES solar facility located south of US Route 11 on Glengarry Farms property in Burke
- A 15-MW solar facility on US Route 11 by Norbut in Chateaugay is approximately 3.8 miles east of the Brookside Solar Project and 1.7 miles outside of the study area.

- Terra-Gen is proposing to construct the North Country Wind Project, a 298-MW 60-turbine wind farm in Burke and Chateaugay, which is proposed to be online in 2023 or 2024. Location details are unknown. This project may or may not fall within the VSA.

These four projects are proposed, and specific equipment and alignment details are uncertain at this time.

The North Country Energy Storage Facility is adjacent to the existing Willis substation located on County Route 33, approximately 1.5 miles south of the Brookside Solar Project. Views of the Facility are not predicted from this location. Direct cumulative effects, or rather, views of both projects at the same time is not anticipated.

Two existing projects have publicly available detail and location data, obtainable from the United States Wind Turbine Database. As noted in the VIA, the existing Jericho Rise Project, a 37-turbine, 77.7-MW wind farm is in the Towns of Chateaugay and Belmont and is located south of US Route 11. The turbines are generally 492 feet tall (150 meters). Sixteen turbines fall within the VSA. The Appendix 8-1 Facility Photolog representing the character of the area in the VSA show several Jericho Rise turbines in the existing view. Just east of the VSA (and east of the Village of Chateaugay) is the existing Noble-Chateaugay Wind Farm, a 106.5-MW capacity wind farm with 71 turbines generally 389 feet tall. Three turbines from the Noble-Chateaugay Wind Farm fall within the VSA approximately 450 feet and less from the outer eastern extent.

While some specific location data is unknown, cumulative effects from a spatial and regional perspective, or that of one traveling through the area, could be experienced. While there is a number of proposed projects in the vicinity, the Nexamp and Glengarry are small solar projects in nearby locations to the Facility. Due to proximity, these projects are likely to be viewed as part of a larger whole following post-construction of all projects, instead of as distinct projects scattered across the landscape. Similarly, the Norbut project in Chateaugay would be embedded generally within the existing Noble-Chateaugay wind farm.

The proposed Brookside Solar Project will also be embedded within the existing Jericho Rise wind farm. Due to the geographically condensed nature of these multiple facilities, there would not be repeated exposure to installations in a large spatially temporal fashion as they are either embedded or contiguous. As seen in Figure 6 of Appendix 8-1, if one were traveling along US Route 11 for example, regional drivers would potentially pass by the nearly contiguous

geographical locations of six out of the eight projects over approximately six miles of highway between the proposed Norbut project to the east and the Glengarry site to the west.

Assessment of cumulative effects has been further investigated for the existing Jericho Rise and Noble-Chateaugay wind farms because of the reliable and public data that is available. In this instance, spatial-temporal-distance relationships was not the focus but rather, simultaneous viewing. These cumulative effects were not necessarily evaluated by considering the entirety of the proposed Facility but only where there would be visibility of an existing wind turbine and a proposed Facility solar array at the same time. Therefore, cumulative effects would not distributed equally, nor might they be prominent. Populated areas including the Villages of Chateaugay and Burke as well as Burke Center will not experience any cumulative effects from the proposed Facility as seen against the existing nearby wind farms, simply because these areas are not predicted to see the solar arrays. To understand what areas will not encounter this type of cumulative effect is to review the visibility results in Figure 6 in Attachment 2. If there is no visibility predicted for arrays, then the possibility is only there for those areas to see just the existing wind turbines.

The Noble-Chateaugay wind turbines are farther from the Facility and east of the Village of Chateaugay and would be diminished in size and scale with potentially more screening from existing forested areas. The existing Jericho Rise project is the more prominent facility that can be seen from many areas within the VSA.

Viewshed analyses for each of the two nearby wind facilities were performed separately using information from the United States Wind Turbine Database (v4.3, January 14, 2022).

Cumulative effects were determined by overlapping those visible areas resulting from the turbines with the Brookside Solar Project visibility, thus representing areas where views of both projects might potentially be obtained. The entirety of each wind farm was analyzed against the proposed Facility. However, visibility results are only shown for those areas within the VSA.

Table 8-5 summarizes the results. Figures 7A and 7B in Appendix 8-1, Attachment 2 shows the cumulative effects viewshed maps.

**Table 8-5. Cumulative Effects – Percentage of Overlapping Visibility of Nearby Wind Projects With the Proposed Facility**

Project	Total Area Comprising VSA Square Miles	Visibility of Project Square Miles	% Overlapping Visibility Within Full VSA	% Overlapping VSA Visibility on Participating Landowner Property	% Overlapping VSA Visibility on Non-Participating Landowner Property
Proposed Facility Only. No overlap	26.95	3.34	12.39% (no overlap)	6.6% (no overlap)	5.79% (no overlap)
Jericho Rise and Proposed Facility	26.95	3.31	12.27%	6.5%	5.77%
Noble-Chateaugay and Proposed Facility	26.95	1.98	7.33%	3.3%	4.03%

As noted, the Jericho Rise wind turbines are in the immediate vicinity of the Facility Site. As Table 8-5 indicates, the level of Jericho Rise turbine visibility when viewing solar arrays at the same time is 12.27%, indicating the percentage of overlapping visibility of the turbines with Facility visibility is nearly the same. This does not mean that all of the Jericho Rise turbines are visible. It is assumed that many of the same proximal turbines are being observed but in different locations within the VSA. Table 8-5 also indicates some Noble-Chateaugay turbines could be seen when viewing solar arrays, with the percentage of overlapping visibility resulting in 7.33%. The Noble-Chateaugay wind farm is farther to the east where these turbines are less visible in the VSA. Noble-Chateaugay turbines would also be distant and more subordinate in the view as opposed to the Jericho Rise turbines.

Several Facility simulations have been chosen with the specific intention of illustrating the cumulative effects and quality of the view at varying distances when turbines and solar arrays are seen together. These include VPs 5, 9, 23, and 38. Refer to Section 10.2.1 that further describes these simulation viewpoints. Overall, the wind turbines visually dwarf the solar panels when viewing the Facility at distance and the contributing cumulative effects of the Facility appear minor, such is at VP23 at Selkirk Road. In some instances when solar arrays are in

closer proximity to the viewer against a wind turbine, the Facility can appear to be co-dominant in the view. Simulation VP38 is an example of a co-dominant view when looking at Proposed Conditions showing only the Facility with the fence line, especially because of the taller collection station components in view. However, the Facility components become subordinate in the view and thus cumulative effects are greatly reduced when viewing the Proposed Conditions simulation with vegetative mitigation added.

As several other simulation views show, while there are arrays that may contribute lateral breadth in the landscape, overall cumulative effects from the Facility vary but overall, do not appear to be prominent due to the natural low profile of the panels. And as noted, landscape screening of the Facility is proposed and will moderate and reduce aspects of the Facility and for nearby residences as well.

## **8(b) Viewshed Analysis**

### ***(1) Viewshed Mapping and Line-of-Sight Profiles***

Typically, the first step in identifying the possibility for Facility visibility within the identified VSA is to complete viewshed maps. A viewshed analysis is a computerized GIS analytical technique that illustrates the predicted visibility expected for a project and allows one to determine if and where a project can geographically be seen. The results of the viewshed analysis can be combined with other sensitive location information such as historic places, national forests, or state parks, etc. in order to understand potential Facility visibility at sensitive receptors. The viewshed maps were prepared and are presented on a recent edition 1:24,000 scale map.

The series of maps contained in Appendix 8-1 depict visibility within two miles of the Facility Site, existing topography, LSZs, visually sensitive resources including public vantage points and cultural and historical resources, existing vegetation and associated screening effects, and representative viewpoints that were used in the simulation process.

LOS elevation profiles were completed to address state aesthetic resources, fulfilling §900.2.9 (b)(1). This regulation states specifically that LOS only be completed for statewide resources of concern. For this Project and as noted in Table 8-4, there are five state resources within the VSA. These include NYS Snowmobile Trail C8C, the Military Trail NYS Scenic Byway (also designated as NYS Bikeway 11), and two NYS Public Fishing Rights Easements (one at Chateaugay River and one at Marble River). LOS analyses are able to provide the viewer with

information that assists in examining the reasons why objects such as solar panels or collection substation components may have impeded views or no views. The underlying topography of a sight line, in addition to vegetative obstructions, can be produced, as can an estimated amount of visibility of the upper portion of an object if it is visible.

## ***(2) Viewshed Analysis and Line-of-Sight Profiles Methodology***

For the viewshed visibility analysis, Light Detection and Ranging (LiDAR) point cloud data from the 2017 NYS Federal Emergency Management Agency (FEMA) Franklin – St. Lawrence counties LiDAR dataset and obtained from the NYS GIS Program website was used. LiDAR data is the best available elevation data as it includes high resolution accurate ground elevations in addition to building heights and individual tree heights that offer realistic physical visual impediments as they occur in the landscape.

The proposed panels for this Facility will have a tracker racking system with solar array panel heights anticipated to be eight feet, 11 inches from finished grade. A height of nine feet was used for the viewshed analysis.

The viewshed model was further developed by establishing an observer height of six feet and the assumption that the Facility would not be visible to a viewer who is standing amongst trees in a forested area for the viewshed analysis that incorporated trees. The final resulting output identified those areas from which viewers would potentially see all or some part of the proposed solar panels. ESRI Spatial and 3D Analyst GIS software were used to develop the viewshed model.

Two viewshed analyses for the solar arrays have been produced to illustrate predicted visibility within the VSA:

- **Screened Viewshed With Vegetation and Buildings**: This viewshed analyses for the solar arrays incorporates topography, buildings, and trees and has been produced to illustrate predicted visibility within the VSA per §900.2.9(b)(1), as it gives the most reasonable and realistic depiction of the surrounding Facility landscape. The results of this analysis provide the focus of visibility discussion in visual impact assessments because of the inherent aspects of reproducing realistic conditions when LiDAR datasets are used.



- Topography-Only Viewshed: A second topography-only viewshed analysis was also performed. The viewshed analysis with only bare earth topography is not recognized as being a realistic representation of potential visibility, as it is not truly reflective of the environment due to the absence of all trees. Despite this limitation of the topography-only analysis, it can be a useful tool in allowing an understanding of how much of the Facility is blocked by terrain alone. Another caveat is that the topography-only results must not be interpreted as representing visibility during leaf-off conditions, since even leaf-off bare branched tree groups act as a solid mass where lines of sight to objects can be screened. Several photos in the Appendix 8-1 Facility Photolog shows how visibility can be impeded even during leaf-off conditions, and thus serve to act more like the analysis using trees than topography alone. Under certain circumstances, there may possibly be visibility through bare-branched trees only if the trees are sparse, if this sparse tree row is the only existing vegetation between the viewer and the site, and if the viewer is in fairly close proximity to the Facility.

The bare earth topography-only analysis is often typically performed to assist a separate historic architectural survey investigation (Survey), which is led by other cultural resource experts for Exhibit 9. The topography-only methodology and results pertaining to visibility of historic resources from the Survey is specific to the guidance, performance standards, and agreements with the New York Office of Parks, Recreation, and Historic Preservation (OPRHP) that is not inclusive for Exhibit 8. Details of bare earth topography visibility results pertaining to the SHPO policy is addressed and discussed further in Exhibit 9 along with the Historic Architectural Resources Survey and Effects Report. Any additional architectural survey properties discovered as a result of the Survey that is above and beyond the data that was provided by SHPO in February 2021 and included herein, can be found in Table 8-4 and associated Appendix 8-1 Attachment 2 mapping.

- Collection Substation: One viewshed analyses was produced using the same LiDAR data and the same methodology as that of the solar arrays using trees and buildings only and with proposed grading and tree clearing addressed. This analysis accounted for the tallest components of the collection substation, which include two tap structures that are 65 feet and 70 feet tall, 52.5-foot tall dead end A-frame structures (a total of 63 feet with an additional 10.5-foot lightning mast), 52.5-foot tall H-frame structures (a total of 64.5 feet tall with an additional 12-foot lightning mast), and one standalone 45-foot-tall

lightning mast within the fence line. Lower height components are 27-foot-tall breakers or those other components shorter than 27 feet such as a capacitor bank, circuit breakers, transformers, and bus support structures. There also is one 12-foot control building.

Certain assumptions, or factors, in the interpretation of results need to be considered:

1. The model, because of its computerized aspect, assumes the observer to have perfect vision at all distances. Therefore, a certain amount of reasonable interpretation needs to be considered because of the limitations of human vision at greater distances or those atmospheric/meteorological conditions that may cause imperfect vision, such as haze or inclement weather. Additionally, an object is naturally smaller and shows much less detail at distances and will have less visual impact. These aspects cannot be conveyed with this analysis.
2. Because an area may show visibility, it does not mean the entirety of the Facility will be seen. The viewshed analysis depicts areas of visibility over a regional area. It can only predict geographically on a map, areas where some part of the solar panels might be seen. It does not and cannot determine if it is seeing a full-on view or a partial view. Additionally, if visibility is occurring in an area, it may sometimes only be a result of glimpsing a portion of the Facility over undulating treetops between gaps of trees, or visibility of the tops of panels and not a full-on view. Likewise, there may be understory tree gaps where there may be visibility of the Facility.
3. The model was developed with the assumption that a viewer would not see the panels if standing among trees in forested areas as it is assumed the tree canopy would preclude outward-looking views.

LOS profiles were created using the same LiDAR elevation data as was used for the viewshed analyses. ArcGIS ESRI 3D Analyst was used to produce linear elevation profiles sampled across select sight lines for bare earth topography and for vegetation.

### **(3) Viewer Group Overview**

Visual sensitivity is dependent upon user or viewer attitudes, the amount of use and the types of activities in which people are engaged when viewing an object. Overall, higher degrees of visual sensitivity are correlated with areas where people live and with people who are engaged in recreational outdoor pursuits or participate in scenic driving. Conversely areas of industrial or commercial use are considered to have low to moderate visual sensitivity because the activities conducted are not significantly affected by the quality of the environment. Views and viewer groups are discussed throughout the Exhibit in the context of aesthetic resources, viewshed visibility results and Facility simulations.

The following concepts are applied when evaluating the visual landscape and assessing the importance of a viewpoint location if it falls in an area of visibility. Viewer groups and associated responses to visual changes are assessed from a variety of factors including

Viewer group – The type of viewers will vary within the VSA and will view the landscape differently. Viewer groups include:

- Local Constituency: People living in the local area and/or surrounding communities who interpret the significance of where they live and interact with others. These people may include local residents, workers, travelers, and members of groups to which the local area is important in different ways. These individuals, apart from local travelers, may have a longer duration views.
- Commuter Constituency: People who use or are generally restricted to travel corridors that are destination oriented, or traveling through the VSA. These people generally have transient short duration views.
- Visitor or Recreational Constituency: Individuals who visit the area to experience its natural appearance, cultural landscape qualities, or recreational opportunities. Visitors may be of local, regional, or national origin. Duration of views may be contingent on the activity.

Context of viewer – The viewer group and associated viewer sensitivity are distinguished among viewers in residential, recreational/open space, tourist, commercial establishments, and workplace areas, with the first two having relative high sensitivity.

Number of viewers – The number of viewers is established by the amount of people estimated to be exposed to the view. In comparing viewing locations to each other, one can consider if the area is a high public use area or if it is a location that is less frequently visited or more inaccessible where the public is not expected to be present (such as marshes or swamps).

Duration of view – Duration of view is the amount of time a viewer would actually be looking at a particular site. Use areas are locations that receive concentrated public-use viewing with views of long duration such as residential back yards. Recreational long duration views include picnic areas, favorite fishing spots, campsites, or day use in smaller local parks. Comparatively, automobile drivers, hikers, canoeists, and snowmobilers will likely encounter a shorter, more rapid transient experience as a person transitions from one linear segment to the next but will encounter more visually varied experiences.

Viewer activities – Activities can either encourage a viewer to observe the surrounding area more closely (hiking) or discourage close observation (commuting in traffic).

#### ***(4) Important and Representative Viewpoints***

Section §900.2.9(b)(4) requires consultations with affected agencies and municipalities. Please also refer to Exhibit 2 for a description of local engagement and outreach. As well, the Facility-specific webpage (<https://www.aes.com/brookside-solar-project>) contains public outreach materials in addition to the Brookside Solar Document Matter Manager (DMM) public domain website.

The Applicant held online information sessions with community members to discuss the Facility (when under the Article 10 permitting process) on May 18 and 19, 2020. The sessions were originally intended to be in person open house events; however, with the implementation of an Executive Order in New York State due to COVID-19 in March 2020, it was transitioned to a virtual setting.

The meeting provided information about the Facility to stakeholders, discussed the impacts the Facility will have on the community, discussed the 94-c process, and gave members of the community an opportunity to voice their opinions and concerns about the Facility beyond the initial input assembled with the PIP Plan. Presentation materials and a summary of meeting logs and presentation questions raised during pre-application meetings are provided as Appendices 2-2, through 2-5 of this Application.

On February 17, 2021, the Applicant submitted written notice to the Secretary to the Commission of the NYSDPS indicating that the Applicant was electing to proceed with development under the 94-c process, and on April 26, 2021, the Applicant filed Notice of Intent to File an Application, and was assigned Matter No. 21-00917 under Section 94-c.

Local agencies were invited to attend a pre-application meeting for the Facility. The meeting was held on Friday, March 12, 2021. The following agencies and organizations were invited to attend: Towns officials, Franklin County officials, State of New York officials, Chateaugay School District, Malone Central School District, local first responders and fire departments, adjacent municipalities, utility providers, and local interest groups. Community members were invited to attend the virtual community meeting for the Facility on Tuesday, March 16, 2021.

On June 22, 2021, an information request was sent out to visual stakeholders. In this request, preliminary visual information was provided, indicating the extent and findings of visibility studies at that point in time, which consisted of identified visual resources as well as the result of the trees-only viewshed analysis, Facility mapping, and the Facility Photolog. Opportunity was provided for visual stakeholders, including local municipalities, to suggest additional and reasonable candidate locations for photosimulations or to append additional visual resources of concern to the inventory. This request to stakeholders was specific to locations that were publicly accessible.

SHPO responded by not requesting any simulations for the time being but was very interested in assessing visual impacts on NRHP eligible historic sites. The Towns of Burke and Chateaugay did not respond formally in writing to the outreach. However, several in-person meetings between the Applicant and the Towns were conducted, with simulation viewpoint selection as a topic of discussion.

The Applicant continues to engage with stakeholders, including groups and individuals with a potential interest in the Facility. In addition to Exhibit 2 Appendices 2-2 through 2-5 and Facility website meeting materials, additional correspondence can be found in Attachment 5.

In undertaking the completion of the VIA the Applicant has provided 10 simulations for the Facility, five in Burke and five in Chateaugay. These locations are identified in Table 8-6 and the simulations are contained in Appendix 8-1, Attachment 4. In addition to consultations, locations were selected to address the following parameters:

- Representative views that offered as much of a clear, unobstructed sightline as possible in joint consideration of the Towns of Burke and Chateaugay discussed viewpoints.
- The significance of viewpoints, designated scenic resources, areas, or features.
- Select representative views that had local residences included.
- The level of viewer exposure.
- Varying distance zones and LSZs as best as Facility views allowed.
- Emphasis on Cumulative Effects views of existing Jericho Rise and Noble-Chateaugay wind facilities in the area

LOS elevation profile views were chosen based on fulfilling §900.2.9 (b)(1). This regulation states specifically that LOS only be completed for statewide resources of concern. State resources are called out in Tables 8-4.

**Table 8-6. Summary Table of Simulation and LOS Viewpoints**

Viewpoint ID	Location	Town	Approximate Distance to Facility	LSZ	Camera Orientation	Comment
4	US Route 11	Chateaugay	508 feet	1,3	NNW	Photo taken to represent aesthetic resource Military Trail NYS Scenic Byway – NYS Bikeway 11
5	St. Patrick's Cemetery, Cemetery Road	Chateaugay	0.70 mile (3,696 feet)	1,4	WNW	Photo taken to represent aesthetic resource NRHP eligible historic site, cumulative effects with Jericho Rise wind turbine, and a view east of Facility
7	Intersection County Route 33 and County Route 23	Chateaugay	308 feet	1	NNW	View from well-traveled county roads.

Viewpoint ID	Location	Town	Approximate Distance to Facility	LSZ	Camera Orientation	Comment
9	East Road	Burke	620 feet	1,3	SE	View showing cumulative effects with Jericho Rise wind turbines, located on northwestern side of Facility in vicinity of residences
13	Lewis Road	Chateaugay	265 feet	1,3	ENE	View from northeastern portion of Facility near residence
23	Selkirk Road	Burke	0.38 mile (2,006 feet)	1,2	NNE	View taken to represent aesthetic resource NYS Snowmobile Trail C8C, cumulative effects, and a view from southwestern portion of Facility
33	US Route 11	Burke	421 feet	1,3	S	Photo taken to represent aesthetic resource Military Trail NYS Scenic Byway – NYS Bikeway 11 in vicinity of residences
38	County Route 23	Chateaugay	554 feet	1,3	WNW	View showing cumulative effects, located on well-traveled road in vicinity of residences
44	East Road, Thayer Corners	Burke	0.22 mile (1,162 feet)	1,3	NE	Photo taken to represent aesthetic resource NRHP

Viewpoint ID	Location	Town	Approximate Distance to Facility	LSZ	Camera Orientation	Comment
						eligible historic site, and a view from populated neighborhood at Thayer Corners
46	County Rout 23	Burke	0.21 mile (1,109 feet)	1,3	NNW	View from the south near residences on well-traveled road
L1*	NYS Snowmobile Trail C8C	Chateaugay	0.26 mile (1,371 feet)	1	NW	LOS from state scenic resource snowmobile trail.
L2*	NYS Public Fishing Rights Easement Chateaugay River at High Falls Campground	Chateaugay	0.87 mile (4,605 feet)	2	SW	LOS from state scenic resource. NYS Public Fishing Rights Easement on Chateaugay River
L3*	NYS Public Fishing Rights Easement Marble River	Chateaugay	1.6 miles (8,539 feet)	2	S	LOS from state scenic resource. NYS Public Fishing Rights Easement on Marble River
L4*	Military Trail NYS Scenic Byway-NYS Bikeway 11	Chateaugay	743 feet	1,3	S	LOS from state scenic resource. Combined Military Trail NYS Scenic Byway and NYS Bikeway 11

\*LOS Viewpoint



## **8(c) Visual Contrast Evaluation**

### ***(1) Facility Simulations and LOS Profiles***

The following discusses the visibility of the Facility to viewers at or in the immediate vicinity of the Facility simulation viewpoint. Simulations are presented as sets of Existing and Proposed Conditions based on VP number and can be found in Appendix 8-1 Attachment 4. Proposed mitigation vegetation at 10 years is anticipated to range between five to 23 feet in height and is depicted in the simulations where vegetative landscaping is proposed. According to the Landscape Plan presented in Appendix 8-1, Attachment 7 (herein termed as Plan 7A) and Appendix 5-1, fully mature heights of the year-round coniferous species could possibly reach heights up to 40 feet in future years. There are two Mitigation Planting Template Types Type 1 planting scheme provides a density of plantings that will be considered a typical visual screening effort for this Facility. Approximately 28 evergreens per 300 feet of linear planting are proposed among the deciduous species. The Type 2 planting scheme provides a density that is considered an alternative screening effort with a greater density of evergreen species with different growth habits than that in Type 1. Approximately 35 evergreens per 300 feet of linear planting are proposed among the deciduous species. Both leaf-on and leaf-off mitigation is shown at a 10 year time frame.

#### **VP4 US Route 11, Military Trail NYS Scenic Byway/NYS Bikeway 11, View Northwest – Chateaugay (LSZ 1,3; Distance 508 feet)**

This viewpoint represents a view along US Route 11 at the eastern side of the Facility approximately 508 feet away. This highway is also an aesthetic resource, designated as both the Military Trail NYS Scenic Byway and NYS Bikeway 11. The photo viewpoint is at a location that has a direct and proximal view to the most eastern arrays as one travels west from the Village of Chateaugay. The area is open farmland north and south of the road with no interfering vegetation between the viewer and the Facility. A commercial garden center is on the south side of the road out of the photo extents but behind the viewer. Residences are nearby approximately 260 feet to the east and 975 feet to the west. The Chateaugay Substation is along the north side of this road 760 feet to the east. Existing views show an open field of light ochres and yellows with a narrow band of leaf-off trees crossing the photo from left to right in the background.

From this viewpoint location, the sight lines in the Proposed Conditions Simulation with only the security fence show clear views of solar panels in the open field. The overall form and line of the arrays is seen as a very narrow horizontal shape sweeping across the view in a similar pattern to the far distant ridge and background trees. New form, line, and color contrasts are introduced and have contiguous lateral breadth. The low profile nature of the arrays do not vertically interrupt the horizon line. Features such as the fence, panels, and racking system have some discernible detail and combined with a repetitive pattern, provide some texture contrast. However, Facility siting employed here consists of a 508' offset from the road. This offset distance assists in moderating the size and scale of the arrays. Overall Project contrast is rated as weakly moderate for this simulation.

As noted, there is no existing vegetation that is purposely being used to screen views. There is a clear view to the field with no intervening trees or shrubs. As depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A, the proposed Type 1 Facility mitigation is intended to provide screening to the non-participating residents in the vicinity as well as for travelers along US Route 11 which is a designated scenic byway. Accordingly, it is expected that the majority of the Facility will be screened as the proposed landscaping grows to maturity, as demonstrated in the simulations with mitigation at 10 years. With the inclusion of vegetative mitigation, views are softened and moderated as the trees and shrubs are more congruous with the existing environment and the Facility color and value contrasts are reduced. Views of the mitigation for motorists will be intermittent and of short duration while longer duration views of the vegetative buffer will be obtained by residences.

**VP5 Cemetery Road, NRHP eligible St. Patrick's Cemetery, View West – Chateaugay (LSZ 1,4; Distance 0.70 mile)**

This viewpoint is located at St. Patrick's Cemetery on Cemetery Road in Chateaugay approximately 0.7 miles (3,696 feet) east of the Facility. VP5 was chosen to represent a view from the eastern side of the Facility as well as at an aesthetic resource. As noted in Table 8-4, St. Patrick's Cemetery is an NRHP eligible historic site in close proximity to the Facility. Existing conditions show a view from the cemetery looking westerly across open field with a residence and large red hanger structure in the middleground. In the far background is US Route 11, a designated scenic byway. Several large commercial buildings, distribution utility lines, and some residences can be seen along the side of the highway in the farther background. The

Chateaugay Substation, also on US Route 11. can be seen in the distance in the left part of the photo. One Jericho Rise wind turbine is in view as well.

Proposed Conditions without mitigation shows very minor visual change. All foreground and middleground views remain intact. There are arrays sited at the left side of the simulation (in the direction of the existing wind turbine) but they are well behind the far tree row and will not be seen. A crest of a small intervening hill also blocks those views in the left of photo. However, a partial view of the Facility exists in the far background on the right side of the photo north of US Route 11 where the arrays can be seen directly behind the Chateaugay Substation. The Facility is not very discernible and provides minor contrast. The in-kind utility of the existing substation helps visually absorb Facility color and texture contrasts. This viewpoint resulted in the lowest Project contrast of the simulations, with a very weak average rating of 2.0. Also noted in the simulation view is some distant tree clearing.

There is no existing vegetation that is purposely being used to screen views and any intervening trees that block views is incidental. As depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A, there is proposed Type 1 Facility mitigation at the fence line facing the road and the viewer. At the viewpoint distance, the Facility appears fully screened by the vegetative landscaping. With the inclusion of the mitigation, views are softened and moderated as the trees and shrubs appear to be a natural occurrence or extension of coniferous trees already seen along the highway corridor. Views of the mitigation at the cemetery will generally be of short duration, or as long as the intended visit.

This simulation set shows the cumulative effects of an added solar Facility against an existing wind farm. One wind turbine is seen in the view. Cumulative effects appear minimal due to limited visibility of the solar arrays from this viewpoint. Cumulative effects that could be introduced by the Facility are minimized by the siting of arrays such that they appear, from this vantage point, hidden by incidental tree groups in the vicinity. Cumulative effects have also been reduced by the added proposed vegetative screening at the arrays located along US Route 11 and behind Chateaugay Substation.

#### **VP7 County Route 33 View Northwest – Chateaugay (LSZ 1; Distance 308 feet)**

This viewpoint represents a view at the southern portion of the Facility. VP7 is approximately 308 feet south of the Facility located at the intersection of County Route 33 and County Route

23. The vantage point represents a view for travelers along County Route 23 and those driving north on County Route 33 as they approach a T intersection. There are no residents at the photo location but the nearest houses encountered are approximately 420 feet south on County Route 33 and 750 feet to the west. Existing conditions show an open field transitioning to a forested area. In the middleground, NYSEG Line 911 Willis Road to Chateaugay 115-kV transmission line can be seen traversing across the landscape. The photo location appears at a slightly elevation location since there is a view looking down on other areas of Chateaugay that can be seen above and beyond the swath of deciduous forest where the horizon is not screened by trees. Horizontal bands of road, ochre field, brown forest and a large shape of blue sky comprise the view.

The Proposed Conditions simulation with only the security fence shows panels in close proximity to the road and the viewer where array size and scale is dominant in the view. New form is introduced into the existing field that provides contrast, but the array mass is geometrically similar to horizontal shapes of light brown open field and the narrow band of trees in the background. The Facility profile at this location is still low enough to not interfere with the horizon line. The color of the arrays is fairly compatible with the distant mass at the horizon and the large blue sky under the cloudless sunny day present in the simulation. The Facility introduces new lines and shape that have high discernible detail because of the close proximity to the road and viewer. Viewer groups affected are local motorists and few residences. There is estimated to be a moderate number of viewers because of the county roadway travel. Average Project contrast for this simulation was rated as weakly moderate with a value of 13.0.

There is no existing vegetation that is purposely being used to screen views. There are clear views to the field with no intervening trees or shrubs. As depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A, there is proposed Type 1 Facility mitigation at this location. As seen in the Proposed Conditions simulations, the vegetative landscaping screens and moderates the view of the arrays.

**VP9 East Road, View Southeast – Burke (LSZ 1,3; Distance 620 feet)**

VP9 is located on East Road in Burke, approximately 620 feet west of the Facility in the vicinity of several residences; one located to the right and several behind the viewer out of the photo extents. Existing conditions gives a southeasterly view and shows an open field with building structures, varying tree rows scattered in the middleground and a more pronounced forested

area in the distance background. Ten existing Jericho Rise wind turbines at varying distances can be also seen in the view. Overall, the view consists of 2 large basic shapes; the light yellow farm field and the blue sky, with a narrow band of middle and background trees traversing across the image. This VP was chosen because it represents unobstructed Facility views that may be experienced by residences and roadway travelers at the northwestern portion of the Facility Site. This VP was also chosen to show the cumulative effects of the proposed solar arrays and the existing Jericho Rise wind farm that is in the area.

The Facility siting and road offset of approximately 620' reduces the contrast and size and scale of arrays as seen in the Proposed Conditions without mitigation. Also, the low profile of the panels are below the horizon line and appear directly in line with the background trees. This juxtaposition allows the panels to be visually absorbed by the narrow band of background trees due to their similar color. The fencing and panels are still visible but subordinate in the view. Average Project contrast was rated as weakly moderate with a value of 11.2.

There is no existing vegetation that is purposely being used to screen views. In fact, some tree clearing in the middleground is proposed. As a result, there are clear views to the field with no intervening trees or shrubs. As depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A, the proposed Type 2 mitigation for this location is intended to provide screening for residences on East Road as well as roadway travelers. Accordingly, it is expected that most of the Facility will not be visible in this view as the proposed landscaping grows to maturity, as demonstrated in the simulations with mitigation at 10 years. With the inclusion of vegetative mitigation, views of arrays are moderated as the trees and shrubs are more congruous with a natural environment. Views of the mitigation for motorists will be intermittent and of short duration while longer duration views of the vegetative buffer will be obtained by residences.

This simulation set shows the cumulative effects of an added solar Facility against an existing wind farm. Several wind turbines can be seen the background where distance relationships keep the turbines approximately as high as the surrounding trees, except for two closer taller turbines seen to the right behind the white barn. Cumulative effects are moderate when looking at the simulation with no mitigation, as the arrays themselves already have fairly low visual contrast. However, cumulative effects introduced by the Facility are minimized by the large road offset and by the added proposed vegetative screening that reduces the visibility of solar panels as seen under Proposed Conditions with mitigation.

**VP13 Lewis Road, View East – Chateaugay (LSZ 1,3; Distance 265 feet)**

This viewpoint generally represents a view at the eastern side of the Facility north of US Route 11. VP13 is on Lewis Road approximately 265 feet west of an array group. Existing conditions show open field sloping slightly upwards with forested areas at the field edge. VP13 vantage point was chosen to show contextual landscape conditions along Lewis Road at eastern arrays as well as in the vicinity of a residence. Existing conditions show two large horizontal shapes consisting of browns and ochres of field and blue sky. A narrow band of trees running left to right in the middle of the photograph splits the two larger shapes.

Proposed Conditions with only the security fence in the simulation show a portion of the Facility arrays and a haul road in the field that follow minor terrain. Some discernible detail is obtained at this viewing distance and the horizon line is not interrupted. Although the arrays occupy much of the view, they basically appear co-dominant against the size and scale of the expansive landscape shape around it. Some tree clearing in the background is noted in the view as well. The arrays en masse are perceived as a larger geometric shape overall, that appear similar to the horizontal geometric pattern seen in the view. The color of the arrays and fence creates a new contrast against the leaf-off colors of early spring. This simulation resulted in one of the highest Project contrasts, rated as moderate with an average contrast rating of 17.5.

There is no existing vegetation that is purposely being used to screen views. There are clear views to the field with no intervening trees or shrubs. As noted in the Landscape Plan drawings Appendix 5-1 and Plan 7A, there is proposed Type 1 Facility mitigation that is intended to provide screening to a nearby non-participating residence as well as at the roadway. As observed in the simulations with mitigation, the proposed landscape plantings occur along the fence line facing the viewer. It is expected that this vegetative mitigation will provide screening and soften and moderate the views as observed in the Proposed Conditions simulations with mitigation. Views of the mitigation for motorists will be intermittent and of short duration while longer duration views of the vegetative buffer will be obtained by the residence.

**VP23 Selkirk Road, NYS Snowmobile Trail C8C, View Northeast – Burke (LSZ 1,2; Distance 0.38 miles)**

VP23 at the southwestern portion of the Facility where the C8C state recreational snowmobile trail runs parallel to Selkirk Road in this area. The Facility is approximately 0.38 miles (2,006

feet) away from the viewpoint where the view overlooks a large agricultural field with a residence in the middleground. There is also one existing Jericho Rise wind turbine in view. Existing conditions show field and sky as large dominant horizontal shapes in the view. Trees present in the view act as a visual perimeter around the field and also presents as a small darker horizontal band in the distant background. A larger forested area is present to the left on the western side of the road and out of the photo extents. This VP was chosen to represent views from the snowmobile trail which is a listed aesthetic resource in Table 8-4. It was also chosen to represent a view from the southwestern portion of the Facility as well as providing a cumulative effects view of the proposed solar arrays and the existing Jericho Rise wind farm that is in the area.

The Proposed Conditions simulation without mitigation shows very minor visual change. All foreground and middleground views remain intact. Tree clearing is observed in this view however the absence of trees still leaves a random mosaic pattern between field and forest that is similar to the existing view. The arrays are in the distance approximately 0.38 miles away near where the visible wind turbine is located. Due to distance, the arrays have a small profile height with little discernible detail. The visual change observed is more of a color change in the environment as the panel colors appear darker against the yellow ochre fields. Long east to west horizontal field and forest shapes occur in the view as a natural appearance of the landscape. The Facility has lateral breadth in the view but the overall appearance is compatible in both scale and shape and seemingly fits into the environment. There is no interruption of the horizon line. The Project contrast for this simulation is rated as weak with an average value of 7.8.

Both leaf-off and leaf-on mitigation at 10 years is also provided as Proposed Conditions simulations. There is no existing vegetation that is purposely being used to screen views. The arrays were sited to accommodate the MWs required on an available participating landowner parcel and any existing vegetation with mitigative effects is incidental. Type 1 mitigation is shown in the Proposed Conditions view with mitigation, as depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A. Although Facility with mitigation is seen in the view from this viewpoint, the landscape plantings are also intended to screen other areas that are not in the view of the photograph. Type 1 landscape planting is seen behind the middleground house in view and goes to the left, intended to screen views to nearby residences that are closer to the Facility near the corner of Selkirk Road and Ketchum Road in the distance.

At this viewpoint, the inclusion of vegetative mitigation softens and moderates the effects of the security fence where proposed. Views of the Facility for motorists and snowmobilers along the trail will be intermittent and of short duration while longer duration partial views may be obtained by residences.

This simulation set shows the cumulative effects of an added solar facility against an existing wind farm. Cumulative effects offered by the proposed solar arrays appear minimal. In this view, the proposed solar arrays are dwarfed in scale by the existing wind turbine and are subordinate in the view. The eyes are generally drawn to the large vertical existing wind turbine that is present. Cumulative effects that could be introduced by the Facility are minimized by the siting of arrays such that they appear, from this vantage point, in a mosaic fashion in and around field and forest. Cumulative effects have also been reduced by a large road offset north of County Route 23 where distance assists in moderating the view such that size and scale is diminished.

**VP33 US Route 11, Military Trail NYS Scenic Byway/NYS Bikeway 11, View South – Burke (LSZ 1,3; Distance 421 feet)**

This viewpoint represents a view along US Route 11 at the western side of the Facility at the Burke-Chateaugay town line. This highway is also designated as both the Military Trail NYS Scenic Byway and NYS Bikeway 11. This VP was chosen for a Facility simulation because it is view from a listed Table 8-4 aesthetic resource and is also a representative view in the vicinity of nearby residences located south of the highway. The view is looking south approximately 421 feet from the Facility. The existing conditions photo shows agricultural land during early springtime conditions, interspersed with sparse small tree groups. The land slopes upwards toward more open land with several building structures visible as well as additional forested areas.

The Facility provides new shapes of color and pattern and can be seen on the sloped hillside down to within 421 feet of the viewer and is overall dominant in the view. There is minor tree clearing observed. While there are some aspects of the arrays that share a similar color to the terrestrial surroundings, there are other portions that do not but more closely match a sky color on the cloudless sunny day. New line and form are introduced into the existing open field and due to proximity allow for moderate to strong discernible detail. While the panels are seen on the hillslope, there is no vertical interruption of the horizon. Project contrast in this simulation



was given one of the highest ratings. It was rated as moderate with an average contrast value of 17.5.

As depicted on the Landscape Plan drawings included in Appendix 5-1, and Plan 7A, there is Type 1 proposed mitigation at the portion of the Facility facing the viewer that is intended to provide screening to US Route 11, a scenic byway, and also to residences on the south side of the road located to the right and out of the view. The landscape plantings will serve to moderate and soften the view as the proposed landscaping grows to maturity as demonstrated in the simulations with mitigation at 10 years. Views of the mitigation for motorists will be intermittent and of short duration while longer duration views will be obtained by the residences.

### **VP38 County Route 23, View Northwest – Chateaugay (LSZ 1,3; Distance 554 feet)**

This viewpoint generally represents a view at the southeastern portion of the Facility. VP38 on County Route is located approximately 554 feet southeast from the fence line in the view. VP38 was chosen to represent one of the most open direct views of the proposed collection substation that can be obtained within the VSA. These direct views can be found along a segment of open roadway along County Route 23. There are several residences along this same road segment as well. The existing conditions photo shows open field with a dense forested area at the far edge of the field in the middleground. The view shows large horizontal shapes of ochre field and blue sky divided by a narrow band on trees that are darker brown. Two of the existing Jericho Rise wind turbines can be seen as well as the existing NYSEG Line 911 Willis Road to Chateaugay 115-kV transmission line that traverses through the area. The transmission structures slightly exceed the trees in height. This photo was also chosen to show the cumulative effects of other utility-based infrastructure that is in the region.

The simulation with no mitigation shows a clear line of sight across the field to the proposed arrays. The large road offset distance of 554 feet moderates the size and scale of the solar arrays and reduces discernible detail while also keeping them below the tops of trees seen in the background despite observed tree clearing. The arrays themselves offer a color contrast and new visual elements in the view against the existing open field. However, this view also shows the collection substation. A textured pattern is created by the rows and the angles of the solar panels that is not otherwise there. While most of the lower portion of the substation is blocked by the solar panels in front of them, including the control building, upper parts of the taller vertical components such as the A-frame, H-frame, and tap structures are visible above

the arrays and interrupt the horizon line of the treetops. Average Project contrast is rated as moderate with a value of 14.3. Overall, and with the addition of the collection substation however, the Facility appears dominant in the view.

There is no existing vegetation that is purposely being used to screen views. Any existing vegetation seen in the simulation that has the ability to block views is incidental. As depicted on the Landscape Plan drawings included Appendix 5-1 and Plan 7A, Type 1 mitigation will serve to screen some views along the open roadway of County Route 23 as well as nearby residences. This simulation with mitigation shows the landscape plantings effectively softening and moderating the view by screening the arrays and the collection substation. Following mitigation at 10 years, only partial views of the upper parts of the substation is expected. Views of the Facility for motorists will be intermittent and of short duration while longer duration partial views will be obtained by residences.

This simulation set shows the cumulative effects of an added solar Facility against an existing wind farm and an existing transmission line that occurs in the view. The existing NYSEG Line 911 Willis Road to Chateaugay 115-kV transmission line can be seen at the far edge of the field near the field-forest interface. Included in the view are two existing wind turbines set farther in the background. Cumulative effects are additive and distinct when looking at the simulation with no mitigation, although the eye is immediately drawn to the tall wind turbines. These cumulative effects are made more so by the inclusion of the taller substation components. However, these cumulative effects introduced by the Facility are minimized by the effective proposed vegetative screening that reduces the visibility of solar panels and the substation.

#### **VP44 East Road Thayer Corners, View Northwest – Burke (LSZ 1,3; Distance 0.22 miles)**

This viewpoint is at the northwestern portion of the Facility in the neighborhood of Thayer Corners in Burke. VP44 is located on East Road at a section of the neighborhood where there is an open gap between houses that affords a view of arrays proposed in a far background field. This photo was chosen to show a view from this neighborhood but also to represent a view in the vicinity of an NRHP eligible historic site located at 15 East Road behind the viewer. The Facility is approximately 0.22 miles (1,162 feet) from the viewpoint. The existing conditions photo shows an existing fence in the foreground and an open field that stretches to a horizontal band of low-growing vegetation at the middleground mixed with a few sparse trees. Beyond the low-growing shrubbery lies a slightly elevated field in the background.

The Proposed Conditions simulation show the Facility in the slightly elevated background field beyond the low-growing middleground shrubbery. The arrays occupy the far field but because of a distance of 0.22 miles they are diminished in size and discernible detail, especially compared to larger foreground shapes and color. While there's new visual elements in the view the scale of the objects is subordinate in the view and merely a slight color change can be detected. A very narrow dark band can be seen, a portion of which minorly interrupts the horizon line on the background hill on the left. Overall average Project contrast in this simulation is weakly moderate with a value of 9.2.

There is no existing vegetation that is purposely intended to screen views, such as the low growing middleground vegetation and scattered trees seen in the simulation. The arrays were sited to accommodate the MWs required on an available participating landowner parcel and any existing vegetation with mitigative effects are incidental. Despite existing trees and shrubs in the view, there is Type 2 vegetative mitigation proposed along the fence line of the Facility itself as seen in the Proposed Conditions with mitigation, depicted on the Landscape Plan drawings included in Appendix 5-1 and Plan 7A. The mitigation is intended to provide screening for non-participating residences at Thayer Corners, but also serves to block some views of this array group to US Route 11, which is southeast of the viewpoint location. Views of the mitigation for motorists will be intermittent and of short duration, while longer duration partial views will be obtained by residences.

#### **VP46 County Route 23, View Northwest – Burke (LSZ 1,3; Distance 0.21 miles)**

This viewpoint is a representative view from County Route 23 at the south-southwestern portion of the Facility. VP46 is located approximately 0.21 miles (1,109 feet) southeast from the Facility fence line. There is a residence behind the viewer. The existing conditions photo shows an expansive cultivated field leading to a more densely forested area in the middleground. The land slopes down where an extended view of the Burke and Chateaugay to the north can be seen farther to the horizon. Distant buildings, forested area and some open land is apparent in the far background. Colors consist of light ochre cornstalks in the open field and muted browns in the middle-background. A large blue shape of sky is also prevalent.

The Proposed Conditions simulation shows minor visual change in the landscape with minimal to no views of solar panels. Essentially, the far-reaching vista is maintained. The land slopes downward and the crest of the small hill in the middleground is responsible for blocking most of

the arrays that are to the left and center. Slight terrain shifts expose the upper portions of a few arrays seen to the right of the distant white residence seen in the photo center. These arrays are also diminished due to the large road offset distance of 0.21 miles. Average Project contrast in this simulation is rated as weak with a value of 4.8.

There is no existing vegetation that is purposely being used to screen views and any existing vegetation seen in the simulation that has the ability to block views is incidental.

### **L1 – NYS Snowmobile Trail C8C, View Northwest (LSZ 1; Distance 0.26 miles)**

LOS L1 is located on NYS Snowmobile Trail C8C and is a state scenic resource in Table 8-4. In addition to this LOS, further attention has been given to snowmobile aesthetic resources: the Applicant has provided a simulation on Selkirk Road facing northeasterly toward solar arrays (VP23).

The LOS profile and viewpoint are along an open field on private land, approximately 0.26 miles (1,371 feet) from the Facility fence line. It is to the southeast of an array grouping at one of the closest points to the Facility from the trail. Near the trail viewpoint about 340 feet to the north is an existing Jericho Rise wind turbine but does not appear along the direct terrain profile. The profile also shows an unobstructed open view across the field where solar arrays are predicted to be visible. Viewer groups are minimal and not part of the greater general public, as only seasonal winter snowmobilers would be experiencing views along this segment of trail, as permissions and agreements allow use for members of the NYS Snowmobile Association. The Franklin Snowmobilers Club maintain this trail.

### **L2 – NYS Public Fishing Rights Easement at Chateaugay River, View Southwest (LSZ 2; Distance 0.87 miles)**

This LOS profile is taken from the Chateaugay River within High Falls Campground where there is a NYS Fishing Rights Easement. The profile location is taken from the shoreline to represent fishing, picnicking, or walking. The LOS is directed southwesterly toward an array group approximately 0.87 miles (4,605 feet) to the Facility fence line. The profile shows there will be no views of arrays as both intervening vegetation and topography will serve to block views.

### **L3 – NYS Public Fishing Rights Easement at Marble River, View South (LSZ 2; Distance 1.6 miles)**

This LOS profile is taken from the Marble River where there is a NYS Fishing Rights Easement. The profile location is taken from the shoreline to represent fishing, picnicking, or walking. The LOS is directed southerly toward one of the nearest array groups, approximately 1.6 miles (8,539 feet) to the Facility fence line. The profile shows there will be no views of arrays as both intervening vegetation and topography will serve to block views.

**L4 – Military Trail NYS Scenic Byway-NYS Bikeway 11, View South (LSZ 1,3; Distance 743 feet)**

LOS L4 is located on US Route 11, which is also designated as the Military Trail NYS Scenic Byway and NYS Bikeway 11. L4 is also located on one of the most well-traveled roads passing by the Facility and is subject to a greater frequency and number of viewers. The highway functional class is rated as a Principal Arterial (Other). This class is described as a non-interstate that consist of a connected rural network of continuous routes that serve corridor movement having trip length and travel density characteristics indicative of substantial statewide or interstate travel.

In addition to this LOS, further attention has been given to US Route 11: The Applicant has provided two simulations from representative viewpoints along the highway where there is predicted visibility. VP4 is located in Burke and faces toward arrays north of the road. VP33 is also in Burke faces south toward both arrays and the proposed collection substation.

There are few expected views of the collection substation from US Route 11. LOS L4 is near the eastern portion of the Facility at a point along the highway where there is predicted views of the proposed substation as well as arrays. In the vicinity is the existing Chateaugay Substation 463 feet to the east and a commercial garden center 275 feet south of the road. However, the viewpoint location of this LOS is in front of one of the few residences in the vicinity and 522 feet west of the existing NYSEG Line 911 Willis Road to Chateaugay 115-kV transmission line.

The profile direction is south and ultimately targets one of the taller station components, an A-frame support structure that is 53 feet tall. The profile shows an unobstructed open view from the road to the panels and then farther south to the substation. Tree clearing will occur on the north side of the substation as indicated on the LOS aerial, which will allow views to the station.

## **(2) Simulations Illustrating Mitigation**

As noted in Exhibit 8 (c)(1) simulations are presented as sets of Existing and Proposed Conditions based on VP number and can be found in Appendix 8-1 Attachment 4. Included in the suite of simulations are those illustrating proposed leaf-off and leaf-on vegetative mitigation at 10 years where proposed, according to the Facility Landscape Plan presented in Appendix 5-1 and Appendix 8-1 Plan 7A.

## **(3) Simulation Contrast Ratings**

Appendix 8-1 VIA describes the concepts and methodology applied to rating visual change incurred by the proposed Facility by evaluating the Facility photosimulations. Simulations illustrating representative views of the Facility without mitigation were rated to evaluate contrasts under worse-case conditions. In doing so, it is understood that proposed vegetative mitigation will moderate or minimize perceived visual impacts. For further information regarding the effects of mitigation please refer to Exhibit 8 (c)(1), and the simulations illustrating post-construction mitigation presented in Appendix 8-1 Attachment 4.

In completing this effort, three panelists evaluated and rated the simulations; Panelists 1 and 2 have been trained in the field of landscape architecture (one which is licensed), and Panelist 3 is a landscape designer. All three individuals have successfully completed ratings on previous solar project applications. A description of the methodology used in the rating process is contained in Appendix 8-1 Attachment 6, as well as panelist qualifications, and the completed evaluation forms for each simulated viewpoint.

Initial training on how to use the visual forms and the intention of each category was explained to each panelist. Subsequently along with the simulations, to complete Part 2, Project location information such as a Google Earth kmz file was provided as well to allow the panelist to better understand and visualize the environment around the viewpoint that otherwise might not have been captured in the photo itself. Using the terrain features as well as Street View provided the reviewer with the ability to discern if there were other residences or vegetation behind the viewer or in the vicinity while also offering the reviewer to the view the camera location from different angles. The reviewers then applied the contrast ratings singularly and independently without consultation with any other party.

Table 8-7 below summarizes the final scores and averages for Part 1 Visual Contrast, Part 2 Viewpoint Sensitivity and Part 3 Existing Scenic Quality. Here, trends of contrast ratings where those VP locations that are considered to have the highest or lowest visual change in relation to each other can be obtained. Mean deviations are also calculated to gauge the variation between each of the panelists.

**Table 8-7. Visual Impact Rating Results**

VP	Location	Contrast Rating Panelist 1			Contrast Rating Panelist 2			Contrast Rating Panelist 3			Avg Part 1	Mean Dev* Part 1	Avg Part 2	Mean Dev* Part 2	Avg Part 3	Mean Dev* Part 3
		Part 1	Part 2	Part 3	Part 1	Part 2	Part 3	Part 1	Part 2	Part 3						
4	US Route 11, Military Trail NYS Scenic Byway, NYS Bikeway 11	12	9.5	1	15	9	1.5	12.5	8	1	<b>13.2 WM</b>	1.2	<b>8.8 WM</b>	0.6	<b>1.2 WM</b>	0.2
5	Cemetery Road, St. Patrick's Cemetery NRHP-eligible historic	5	11.5	1	1	1	1.5	0	9.5	0.5	<b>2 VW</b>	2.0	<b>7.3 W</b>	4.2	<b>1.0 W</b>	0.3
7	County Route 33	13.5	6.5	1	17	6.5	2	8.5	7	1.5	<b>13 WM</b>	3.0	<b>6.7 W</b>	0.2	<b>1.5 WM</b>	0.3
9	East Road	14	6.5	1	11	5.5	1.5	8.5	6	1.5	<b>11.2 WM</b>	1.9	<b>6 W</b>	0.3	<b>1.3 WM</b>	0.2
13	Lewis Road	17.5	6.5	1	18	5.5	1.5	17	5	1.5	<b>17.5 M</b>	0.3	<b>5.7 W</b>	0.6	<b>1.3 WM</b>	0.2
23	Selkirk Road, NYS Snowmobile Trail	10	9.5	1	8	8.5	1.5	5.5	9	1.5	<b>7.8 W</b>	1.6	<b>9 WM</b>	0.3	<b>1.3 WM</b>	0.2
33	US Route 11, Military Trail NYS Scenic Byway, NYS Bikeway 11	17.5	8.5	1	18	9	1.5	17	8.5	1.5	<b>17.5 M</b>	0.3	<b>8.7 WM</b>	0.2	<b>1.3 WM</b>	0.2
38	County Route 23	15	5.5	1	16	4.5	1	12	6	1.5	<b>14.3 M</b>	1.6	<b>5.3 W</b>	0.6	<b>1.2 WM</b>	0.2
44	East Road, Thayer Corners, NRHP Eligible historic	9	8.5	1	8.5	8.5	1.5	10	9.5	1.5	<b>9.2 WM</b>	0.6	<b>8.8 WM</b>	0.4	<b>1.3 WM</b>	0.2



EXHIBIT 8

46	County Route 23	6	4	1	4.4	5.5	1.5	4	6	1.5	<b>4.8 W</b>	0.8	<b>5.2 W</b>	0.8	<b>1.3 WM</b>	0.2
----	-----------------	---	---	---	-----	-----	-----	---	---	-----	------------------	-----	------------------	-----	-------------------	-----

\*Mean Dev = mean deviation

\*\*VW=very weak, W=weak, WM= weakly moderate, M=moderate, MS=moderately strong, S=strong

**Part 1 Contrast Rating**

Part 1 Contrast rates proposed visual change against existing conditions with respect to compositional elements such as newly introduced lines, shapes, colors, facility scale, and broken horizon lines. Under Part 1, there are nine categories to rate, where the total rating ranges from 0 to 27. The scale is as follows:

<b>Contrast Rating Scale</b>	
0	None
0 - 4.5	Very Weak
4.5 - 9	Weak
9 - 13.5	Weakly Moderate
13.5 - 18	Moderate
18 - 22.5	Moderately Strong
22.5 - 27	Strong

The viewpoints with the highest Part 1 Contrast are VP13 on Lewis Road and VP33 on US Route 11, each with an average contrast rating of 17.5. These two simulations also show the Facility in fairly close proximity to the viewer at 265 feet and 421 feet away, respectively, and generally dominating the view. The Facility will not be seen in its entirety at these locations because only a portion of the arrays are visible from these locations. However, the proposed view results in a moderate contrast rating due to new form, color, line, and texture contrasts of discernible detail compared to what is currently there. There is mitigation proposed at each of these viewpoints that will provide a vegetative buffer to provide year-round screening. VP38 is also rated as moderate but with an average rating a little lower at 14.3. Distance to this VP is farther away at 554 feet from the viewer.

The next highest contrast groupings, which are rated as weakly moderate, are VP4 on US Route 11 (508 feet from the Facility, average rating of 13.2), VP7 on County Route 33 (308 feet away, average rating of 13.0), VP9 on East Road (620 feet from Facility, average rating of 11.2) and VP44 on East Road at Thayer Corners (0.22 miles away, average rating of 9.2). The Facility as seen in each of these simulation viewpoints has vegetative mitigation proposed.

Two viewpoints are assigned a Part 1 contrast rating of weak. They are VP23 on Selkirk Road (0.38 miles feet away) and VP46 on County Route 23 (0.21 miles away away) where average

ratings are 7.8 and 4.8, respectively. Each of these views are distant. VP23 is nestled in a field within trees rows and forest, while VP46 has the crest of a hill blocking a substantial portion of the arrays. There is vegetative mitigation proposed for these two viewpoints.

Lastly, one VP5 at Cemetery Road has an average contrast rating of 2.0. The Facility simulation is the farthest away from the viewer at 0.70 miles and nestled within a forested area north of US Route 11. With the angle of view, any part of the arrays that can be seen are primarily behind the in-kind infrastructure of Chateaugay Substation.

Mean deviations were calculated to observe the level of variance between the panelists within each simulation evaluation. Mean deviations ranged between 0.3 and 3.0. It appears panelist opinion varied the most regarding contrasts when assessing VP7. VP7 has a mean deviation of 3.0. While all acknowledged new line, form, and color are incongruous, one panelist rated contrast consistently higher and the other rated consistently lower while a third was in the middle. Some felt the color of the panels were compatible with the sky color but also thought contrast was reduced because of the ability to see the distant landscape horizon.

Lowest mean deviations occurred with VP13 and VP33, which incidentally have the highest contrast ratings. It appears that panelists were in firm agreement about the level of contrast would be experienced at these two viewpoints where the assessment of visual change appeared more straightforward.

**Part 2 Viewer Sensitivity**

There are eight categories under Part 2 to rate where the total rating ranges from 0 to 24. The scale is as follows:

<b>Contrast Rating Scale</b>	
0	None
0 - 4	Very Weak
4 - 8	Weak
8 - 12	Weakly Moderate
12 - 16	Moderate
16 - 20	Moderately Strong
20 - 24	Strong

Part 2 takes into account viewer sensitivity, in particular if the VP falls within or has a view of an existing visual receptor as well as the character of viewer groups such as number of viewers, duration of view, presence of existing development, etc.

All Part 2 Viewer Sensitivity ratings were assigned a weak or weakly moderate rating, ranging from 5.2 to 9.0. The highest regarded viewpoints rated as weakly moderate are VP4 at US Route 11, VP23 at Selkirk Road, VP33 at US Route 11, and VP44 at East Road at Thayer Corners. This grouping of four appear as the most sensitive sites mainly because they are viewpoints at aesthetic resources. However, they remain with a weakly moderate rating because panelists evaluated these locations as being in a rural location with relatively few residences in the near vicinity as well as having mostly views that are transient and of short duration. VP5, the recommended NRHP eligible historic cemetery is recognized as an aesthetic resource but has a sensitivity rating of weak. This resource was dropped to a lower rating than the other resources because panelists felt by nature, a cemetery generally has a very low number of viewers of short duration as compared to the other resource locations.

The remaining viewpoints were rated as weak because by comparison to the group they are not an aesthetic resource. Again, panelists felt the area of these viewpoints had a low number of viewers with relatively fewer residences in the area.

Mean deviations for Part 2 Viewer Sensitivity show variance ranging between 0.2 and 4.2. Generally, Part 2 is less subjective. VP5 at St. Patrick's has the biggest difference of opinion with a mean deviation of 4.2. Here the difference is explained because of direct views of US Route 11 from the cemetery. Panelists had varying opinions on how much emphasis was given to the various utility and commercial development seen from the cemetery. The remaining nine viewpoints had good agreement on viewer sensitivity levels as mean deviations were 0.8 or less.

### **Part 3 Scenic Quality**

Part 3 Scenic Quality is a standalone single rating that assesses the overall scenic quality of the VP's existing conditions. For this rating, there is no evaluation of visual change, only a simple appraisal of the scenic quality of the view. A rating of 1 is weak, 2 is moderate, and 3 is strong.

Scenic quality of nine of the viewpoints have a rating of weakly moderate while one viewpoint, VP5 was rated as weak. VP7 at County Road 33 was rated the highest of the group with a scenic quality value of 1.5, generally due to open field with far-reaching landscape views to the horizon that can be seen in the view.

Scenic quality for eight of the simulations were weakly moderate and given a scenic quality rating of 1.2 or 1.3. However, this is not to imply that views are not pretty, restful, or important to the community. Although there are restful views of open fields, panelists also felt that the particular viewpoint views were average and typical of the area and that views did not offer a high degree of landscape diversity, show distinct aesthetic focal points that enhance scenic quality, or offer other types of outstanding views according to criteria in Attachment 6. Most views have a similar large horizontal shape in the photo consisting of foreground-midground fields in the bottom half of the photo and several with a band of background trees in the middle and the upper half of the photo showing sky. However, the intent was to provide simulations of the Facility from visual resources and representative views of what the community would experience from nearby residences and roadways.

VP5 at St. Patrick's Cemetery was the only view rated as weak due to the existing utility and commercial development that can be seen from the cemetery as compared to the other locations.

Mean deviations for Part 3 are comparatively very low, ranging either a 0.2 or 0.3 rating. This suggests the panelist's opinions on scenic quality regarding each viewpoint are very similar.

#### **8(d) Visual Impacts Minimization and Mitigation Plan**

A Visual Impacts Minimization and Mitigation Plan is discussed in the VIA, which includes proposed minimization and mitigation alternatives based on an assessment of mitigation strategies, including the consideration of screening (landscaping), architectural design, visual offsets, relocation or rearranging facility components, reduction of facility component profiles,

alternative technologies, facility color and design, and lighting options for work areas and safety requirements, as applicable.

The VIA further discusses mitigation measures that may be implemented in order to reduce or minimize, potential visibility and generally consists of proper siting and design, and vegetative plantings.

### Siting and Design

Siting layout and design considerations that offer mitigation, are summarized as follows:

- Minimized vegetation clearing outside of the arrays to preserve existing trees and other vegetation to the best extent possible.
- Panels proposed against background trees to reduce visual contrasts, as color contrasts can be visually absorbed and moderated by the background trees.
- Setbacks and offsets: The Facility alignment has been designed to incorporate and abide by and/or exceed the minimum property and building setback distance requirements for 94-c (see Exhibit 5 for more detail). The Applicant used minimum setbacks of 500 feet from non-participating occupied residences, 100 feet from non-participating residential property lines, and 50 feet from the center line of public roads and non-residential, non-participating property lines.
- The Facility has been designed to comply with local laws related to visual impact minimization (See Exhibit 24 for further details on compliance with local laws).
- General site location placed far from sensitive agency recognized and listed visual receptors, as best as practicable.
- The Facility has been sited away from larger population centers to minimize potential visibility by a relatively larger number of viewers.
- The collection substation and switchyard are located proximal to the existing transmission right-of-way for minimally distant new interconnects.

- The collection substation is located close to wooded areas with a large setback distance from nearby roads.
- Collection lines have been placed underground to decrease additional aboveground Facility visibility. This configuration allows continued use of the land within the Facility Site.
- Use of antireflective coatings on solar panels. Solar photovoltaic panels are also designed to absorb light and minimize reflected light and therefore, produce minimal, if any, glare.
- Racking systems consist of non-reflective metallic materials.

### Downsizing and Low Profile

The size and profile of the Facility in terms of dimensions is necessary to achieve Facility purpose and MW capacity. Panels are anticipated to have a maximum height of eight feet, 11 inches from finished grade, inclusive of the racking system which is low-profile as compared to the typical existing trees and buildings. The Facility is also using tracker and bi-facial panel technology. The maximum height of a tracker system, however, is only sustained for a short period during daylight hours as the racking makes continuous angle adjustments to follow the sun. For example, tracker systems lay flat near mid-day when the sun is directly overhead resulting in a panel height considerably lower than the maximum height. If needed, tracker arrays allow for the ability to directly program and adjust panel tilt in certain areas at certain times of day to minimize and eradicate glare in problem areas.

### Alternate Technologies

Alternate technologies generally do not exist that would substantially reduce the visibility and visual impact of the proposed Project. However, some newer technology that solar facilities are using more frequently, including the Brookside Solar Project, are bifacial solar panels. Bifacial solar panels allow for light sensitivity on both sides. By constructing the arrays with the bifacial solar panel presentation, the Applicant is able to minimize the overall Facility footprint and still meet the MW capacity.

### Facility Color

Generally, parts of the facility such as racking systems and collection substation (gray) and their color and form cannot easily be changed as materials are standardized. Racking systems will consist of non-reflective metallic materials.

Current technology of PV solar panels must be manufactured to certain specifications to function as intended. Solar panels, however, are consistent in color and designed to reflect the least possible light. Since the solar panels are manufactured to absorb light and minimize reflected light, they therefore, produce minimal, if any, glare. Additionally, the Facility will use antireflective coatings on solar panels.

#### Relocation and Rearranging Facility Components

The Applicant has undergone several iterations of the facility alignment prior to final design drawings mainly due to new or updated landowner agreements and boundary setback adjustments, as well as shifts in stormwater design at the collection substation. However, most changes and shifts of Facility components were due to avoidance of wetlands impacts. The Applicant carefully designed the Facility to avoid state jurisdictional wetlands and the adjacent areas. Through minimization efforts including a thorough design process and multiple drafts and revisions of the Facility, the Applicant ensures that wetland impacts were avoided and/or minimized to the maximum extent practicable.

#### ***(1) Advertisements, Conspicuous Lettering, or Logos***

Other than warning and safety signs, no advertisements, conspicuous lettering, or logos will be permitted on Facility components.

#### ***(2) Electrical Collection System***

The collection system will be placed underground. However, should subsequent unforeseen engineering, construction, or environmental constraints dictate the need for overhead infrastructure, such apparatus will be utilized for the shortest distance possible.



**(3) *Electrical Collection and Transmission Facilities***

Electric collection and transmission structures shall have a non-glare finish. Use of a dark brown or green weathered steel dead-end structure shall be considered in the development of final engineered design.

**(4) *Non-Specular Conductors***

Non-specular conductors shall be used for any portion of the transmission line and electric collection system.

**(5) *FAA Wind Turbine Color Requirements***

This section is not applicable to the Facility because it is a solar project.

**(6) *Shadow Flicker for Wind Facilities***

This section is not applicable to the Facility because it is a solar project.

**(7) *Glare for Solar Facilities***

The Applicant prepared a Glint and Glare Analysis, included as Plan 7C in the Appendix 8-1 Minimization and Mitigation Plan (Attachment 7), to identify any potential glint/glare impacts. The results of the analysis indicate that there are no predicted glare occurrences for nearby residences or roadways as a result of the proposed single-axis tracking arrays. Please also refer to Exhibit 8 (a)(9) for a discussion on glare.

**(8) *Planting Plan***

Vegetative landscape plantings are proposed to minimize visual impacts to the maximum extent practicable under §900.2.9 (d). The regulations do not state that 100% screening must be achieved. There may be areas where views are not entirely blocked.

An abbreviated version of the Landscaping Plan for vegetative mitigation can be found in as Plan 7A in Appendix 8-1 VIA, Attachment 7. The full plan can be found in Appendix 5-1 of Exhibit 5 engineering drawings.

Vegetative mitigation, or screening, can be effective in further minimizing views. To provide additional screening, a landscape plan was developed that contains sustainable, hearty and resilient plantings that primarily consist of native/indigenous species. The planting scheme has an emphasis on evergreens which will help minimize year-round views into the Facility Site. Additionally, ornamental, pollinator-friendly, small trees and shrubs have been incorporated into the plan to provide a more natural look, as well as being more aesthetically pleasing and complimentary to the surrounding area. The following items and concepts were applied to the plan:

- Native/indigenous evergreen trees and pollinator-friendly deciduous shrubs and small ornamental tree species were selected for the vegetative buffer. The species chosen will need to reach an adequate height and width to provide the appropriate visual screening required while also maintaining minimum mature heights that will not produce shade over the Facility in later years. Deciduous and evergreen tree species include balsam fir (*Abies balsamea*), northern white cedar (*Thuja occidentalis*), white spruce (*Picea glauca*), eastern red cedar (*Juniperus virginiana*), flowering dogwood (*Cornius florida*), and downy shadbush (*Amelanchier arborea*). Shrub species include red chokeberry (*Aronia arbutifolia*), red twig dogwood (*Cornus sericea*), common witch hazel (*Hamamelis virginiana*), common winterberry (*Ilex verticillata*), and highbush blueberry (*Vaccinium corymbosum*).
- The plantings are proposed along the outside fence line or at property boundaries in locations noted on the Landscaping Plan. Two planting types are proposed for an approximate total of 26,145 linear feet of vegetative mitigation around the arrays:
  - Mitigation Planting Template Type 1: This planting scheme provides a density of plantings that will be considered a typical visual screening effort for this Facility. Approximately 28 evergreens per 300 feet of linear planting are proposed among the deciduous species. Type 1 plantings will be utilized/implemented along 18,730 linear feet (72%) of the Facility.
  - Mitigation Planting Template Type 2: This planting scheme provides a density that is considered an alternative screening effort with a greater density of evergreens. Approximately 35 evergreens per 300 feet of linear

planting are proposed among the deciduous species. Approximately 7,415 linear feet (28%) of Type 2 plantings are proposed to be used within the Facility site.

- A northeast native wildflower and grass seed mix using native/indigenous warm and cool season grasses was developed especially for the areas under and around the solar array fields. Native pollinator seed mixes are intended to provide excellent wildlife food and shelter that will attract a variety of pollinators and songbirds. Pollinator seed mixes are intended to provide nectar and food sources for a variety of pollinators and larva. and is considered favorable for wildlife habitat and sustainable growth. The native wildflowers and grasses in this mix provide an attractive display of color from spring to fall. The seed mix will provide a groundcover that minimizes erosion concerns, does not pose any shading issues, and is manageable year-round. Appendix 5-1 of Exhibit 5 identifies the species that are included in the grass seed mix.
- Expected growth heights (depending on the specific tree or shrub species) are expected to be between five to 23 feet at 10 years. However, fully mature heights of the year-round coniferous species may reach up to 40 feet high.

It is important to note that an annual Operation and Maintenance (O&M) effort will be provided to ensure that proper care and attention is given to the proposed plantings once they have been installed. Annual O&M efforts will include, but not be limited to, selective pruning, mowing, and monitoring of invasive species. Additionally, landscaping notes in the Landscaping Plan will provide further direction, recommendations, insight, and guidelines to ensure a healthy, viable, and sustainable landscape throughout the life-cycle of the Facility to the maximum extent practicable.

### **(9) Lighting Plan**

Lighting is proposed only at the Facility substation, and is only intended for security, safety, and maintenance purposes. The Facility's Lighting Plan along with the collection substation plan and profile drawing is included as Plan 7B in Appendix 8-1 VIA, Attachment 7. The Lighting Plan was developed to minimize fugitive light while meeting lighting standards established by the National Electrical Safety Code (NESC). The proposed lighting also complies with Occupational

Safety and Health Administration (OSHA) requirements, as proper illumination will be provided for all working spaces around the electrical equipment. All of which has been designed so that control points or persons making repairs will not be endangered by “live parts” or other equipment.

Lighting has been designed to provide an average of 2 foot-candles, to eliminate unnecessary light trespass beyond the substation. Light fixtures will be mounted at a height not to exceed 15 feet and will not be illuminated during unoccupied periods. Full cut-off fixtures and task lighting will be used wherever feasible, as specified in the Lighting Plan. The lighting plan addresses the following, as applicable:

- Security lighting needs at the substation. Lights are located on such structures as the takeoff, control house, CT metering, and three pole-mounted locations – two of which are located near entries to the substation.
- All lighting will be activated manually and installed facing downward to minimize potential impacts to the surrounding public.
- Plan and profile figures to demonstrate the lighting area needs and proposed lighting arrangement and illumination levels to provide safe working conditions at the collection substation site;
- Exterior lighting design will be limited to lighting required for health, safety, security, emergencies, and operational purposes and will be specified to avoid off-site lighting effects as follows:
  - Using task lighting as appropriate to perform specific tasks; limiting the maximum total outdoor lighting output; task lighting fixtures will be designed to be placed at the lowest practical height and directed to the ground and/or work areas to avoid being cast skyward or over long distances, incorporate shields and/or louvers where practicable, and capable of manual or auto-shut off switch activation rather than motion detection; and
  - Requiring full cutoff fixtures, with no drop-down optical elements (that can spread illumination and create glare) for permanent exterior lighting. Manufacturer’s cutsheets of proposed lighting fixtures are provided.

## Conclusions

Please refer to Exhibit 8 (8) for a highly detailed summary of conclusions as a result of the VIA. Overall, the VIA determined that visibility of the arrays would occur on 12.39 percent of the land area within the VSA. There would be areas from which the Facility would be visible, but there are a multitude of areas from which it would not be visible. Overall cumulative effects from the Facility vary but do not appear to be prominent due to the natural low profile of the panels. The Applicant is proposing to install landscaping along portions of the Facility to provide nearby residences with screened views. The Facility has been designed to comply with local laws relevant to visual minimization, 19 NYCRR § 900-2.9 and the Uniform Standards and Conditions (USCs) and visual impacts have been avoided and minimized to the maximum extent practicable.

## References

- Hoehn, B.D., Diffendorfer, J.E., Rand, J.T., Kramer, L.A., Garrity, C.P., and Hunt, H.E., 2018, United States Wind Turbine Database (v4.3, (January 14, 2022): U.S. Geological Survey, American Clean Power Association, and Lawrence Berkeley National Laboratory data release, <https://doi.org/10.5066/F7TX3DN0>.
- Massachusetts Department of Energy Resources. "Clean Energy Results, Questions and Answers, Ground Mounted Solar Photovoltaic Systems." Energy Center, June 2015. <http://www.mass.gov/eea/docs/doer/renewables/solar/solar-pv-guide.pdf>.
- Multi-Resolution Land Characteristics Consortium. USGS 2016 National Land Cover Database. Accessed March 2021. Available at: <https://www.mrlc.gov/>.
- National Park Service (NPS). Find a Park in NY. Accessed March 2021. Available at: <http://www.nps.gov/state/ny/index.htm>.
- National Recreation Trails (NRT). The National Recreation Trails Database. Accessed March 2021. Available at: <https://www.nrtdatabase.org/>.
- National Wild and Scenic Rivers. Explore Designated Rivers. Accessed March 2021. Available at: <https://rivers.gov/map.php>.
- New York State Department of Environmental Conservation (NYSDEC). New York's Forest Preserve. Accessed March 2021. Available at: <http://www.dec.ny.gov/lands/4960.html>.
- New York State Department of Transportation (NYSDOT). (2016). Annual Average Daily Traffic. Available at: <https://www.dot.ny.gov/gisapps/functional-class-maps>.
- New York State GIS Program Office. (NYGISPO). Public Fishing Rights. Accessed March 2021. <http://gis.ny.gov/gisdata/>
- New York Natural Heritage Program (NYNHP). New York Protected Areas Database. Accessed March 2021. Available at: <http://www.nypad.org/>.

New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP). State Parks. Site specific request made and received February 2021. Follow ups with Exhibit 9 SHPO consultations.

NPS. National Natural Landmarks in New York. Accessed March 2021. Available at: <https://www.nps.gov/subjects/nnlandmarks/nation.htm>.

NPS. Nationwide Rivers Inventory. Accessed March 2021. Available at: <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm>.

NYSDEC. List of State Forests By Region. Accessed March 2021. Available at: <http://www.dec.ny.gov/lands/34531.html>.

NYSDEC. Critical Environmental Areas. Accessed March 2021. Available at: <http://www.dec.ny.gov/permits/6184.html>.

NYSDEC. State Lands Interactive Mapper. Accessed March 2021. Available at: <https://gisservices.dec.ny.gov/gis/dil/>.

NYSDEC. York Public Fishing Rights Maps. Accessed March 2021. Available at: <https://www.dec.ny.gov/pubs/42978.html>.

NYSDEC. Wild, Scenic and Recreational Rivers. Accessed March 2021. Available at: <https://www.dec.ny.gov/permits/32739.html>.

NYSDOT. Bicycling in New York. Accessed March 2021. Available at: <https://www.dot.ny.gov/bicycle>.

NYSDOT. New York State Scenic Byways. Accessed March 2021. Available at: <https://www.dot.ny.gov/scenic-byways>.

NYGISPO. Scenic Areas of Statewide Significance. Accessed March 2021. Available at <http://gis.ny.gov/gisdata/>.

NYGISPO. NYSDEC Lands. Accessed March 2021. Available at <http://gis.ny.gov/gisdata/>.

NYS Energy Research and Development Authority (NYSERDA). New York Solar Guidebook for Local Governments. January 2019. Available at:

<https://www.nyserda.ny.gov/All%20Programs/Programs/Clean%20Energy%20Siting/Solar%20Guidebook>.

NYSOPRHP. Heritage Areas. Accessed March 2021. Available at: <https://parks.ny.gov/historic-preservation/heritage-areas.aspx>.

NYSOPRHP. Trails. Accessed March 2021. Available at:

<http://www.nysparks.com/recreation/trails>.

Smardon, R.C, Palmer, J.F, Knopf, A. and Girinde, K. 1988. Visual Resources Assessment Procedure for US Army Corps of Engineers. Department of the Army.

Town of Burke website. Accessed March 2021. <https://www.burkeny.org/>.

Town of Chateaugay website. Accessed March 2021. Available at:

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

United States Department of Agriculture (USDA), National Forest Service. (1995). Landscape Aesthetics, A Handbook for Scenery Management. Agricultural Handbook 701. Washington D.C.

United States Department of the Interior (USDOI) (2013). Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands. Bureau of Land Management. Cheyenne, Wyoming.

United States Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

USDOI. (1986). Bureau of Land Management. Handbook H-8431: Visual Contrast Rating.

USDOI. (1980). Bureau of Land Management. Visual Resource Management Program. U.S. Government Printing Office. 1980. 0-302-993. Washington, D.C.

United States Department of Transportation (USDOT). America's Byways. Accessed December 2020. Available at: <https://www.fhwa.dot.gov/byways/states/NY>.



United States Fish and Wildlife Service (USFWS). (2019). National Wildlife Refuge Locator.  
Available at: <https://www.fws.gov/refuges/friends/friendsLocatorMaps/index.html>.  
Accessed December 2020.