

# **Agricola Wind Project**

**Permit Application No. 23-00064**

**1100-2.16 Exhibit 15**

## **Agricultural Resources**

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## EXHIBIT 15 AGRICULTURAL RESOURCES

As described in this Exhibit, the majority of the Facility Site is enrolled in Certified Agricultural Districts and approximately 78% of the Facility Site is comprised of active agricultural land.<sup>1</sup> To date, numerous wind projects have been built on agricultural land and within Certified Agricultural Districts in New York State. When appropriately designed and built, these projects are consistent with, and supportive of, agricultural land uses and districts and allow continued use of farmland for agricultural production. In addition, as described in Exhibit 18, direct economic benefits of wind facilities, including the proposed Project, will support existing agricultural operations in the form of lease payments.

Wind turbines sited in agricultural land are compatible with and can even be beneficial to agricultural production as well as farmers. Many crops (e.g., corn) require a high availability of carbon dioxide (CO<sub>2</sub>) in order to grow. Wind turbines increase the amount of air being mixed above agricultural lands and can therefore increase the rate of photosynthesis by allowing more CO<sub>2</sub> to become available for crops, which spurs more growth and increases crop yields (Afetian, 2018). A boost in CO<sub>2</sub> can also reduce water loss through transpiration. Additionally, windier conditions overnight results in a smaller amount of dew on leaves, which decreases the opportunity for harmful fungal diseases to grow on crops (Afetian, 2018). Wind turbines can also stabilize temperatures and minimize impacts caused by significant temperature swings (Afetian, 2018).

Moreover, renewable energy produced by wind facilities such as the proposed Facility reduce the effects of climate change on agriculture and farming. It is commonly known that farming practices and agricultural production around the world, and here in New York, are impacted by the effects of climate change, such as severe weather, including hotter summers with frequent drought conditions, warmer winters with more lake-effect snowstorms, and storm systems with extreme rainfall. These climactic factors create abiotic stresses for crops, such as salinity, drought, heat stress, and cold stress (Malhi et al., 2021). In the northeastern United States, there is a probability of more warm extremes, lesser cold extremes, and strengthened precipitation extremes in the future, and these changes are intensified by higher greenhouse gas emissions (Malhi et al., 2021). In parallel, continued sea-level rise along heavily populated coastlines has the potential to displace millions of residents and create new real estate development pressures for farmland. Wind energy generating facilities, such as the proposed Facility, have fewer overall effects on the environment than many other energy sources, offering an opportunity to reduce state-wide reliance on fossil fuels with the downstream effect of reducing the negative consequences of climate change.

In addition to having crop production benefits, wind generating facilities can also be financially beneficial to agricultural landowners. Landowners can either sell their land completely or they can lease their land for the siting of wind facility components. Farmers can then use the income generated from either selling or leasing the land to reinvest in their agricultural land. If the land is leased, the portion of the farmland that

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<sup>1</sup> Active agricultural land is defined as all lands involved in the production of crops, livestock and livestock products at least three of the last five years.

will not host turbines remains usable for crop production, even after the construction of the facility has taken place (Trvst, 2022).

## (a) Study Area Assessment

### (1) NYS Certified Agricultural Districts

The Agricultural Districts Law, (Article 25-AA, Section 305-A of the New York State Agriculture and Markets Law), is a county- and state-wide effort intended to preserve, protect, and encourage the development and improvement of New York State's most valuable agricultural assets. The Agricultural Districts Law encourages the continued use of farmland for agricultural production by the following means:

- Provide a framework to limit local regulation on farm practices.
- Modify public agencies' ability to acquire land through eminent domain.
- Modify the right to advance public funds to construct facilities that encourage development.
- Require state agencies to modify regulations to encourage farming.
- Provide Right to Farm provisions for protection from private nuisance suits.

The Agricultural Districts Law also allows reduced property tax bills for land in agricultural production by limiting the property tax assessment of such land to its prescribed agricultural assessment value. Depending on the design and construction plans, projects such as the Facility can be consistent with and supportive of agricultural land uses if the site is allowed to return to its prior agricultural use following decommissioning.

New York State Agriculture and Markets Law §303b allows land to be added to agricultural districts through an annual process; however, land can only be removed from districts as part of a mandatory eight-year review. Cayuga County contains one consolidated agricultural district (Cayuga County Agricultural District 5), located within the Facility Site (CUGIR, 2020). The next eight-year review for Cayuga County Agricultural District 5 is scheduled for March 27, 2028.

The 5-mile Study Area, which encompasses approximately 101,606 acres, includes agricultural district lands in Cayuga County. The 3,989-acre Facility Site includes only agricultural district lands in Cayuga County (see Table 15-1). Approximately 87% of the 5-mile Study Area and 99% of the Facility Site, respectively, are comprised of lands enrolled in an agricultural district.

**Table 15-1. Lands Enrolled in Agricultural Districts**

Area of Interest	Lands Enrolled in Agricultural Districts (acres)
New York State	>9,000,000
Cayuga County	358,557
<b>5-mile Study Area</b>	<b>88,464</b>
Cayuga County Agricultural District 5	88,464
<b>Facility Site</b>	<b>3,961</b>

Area of Interest	Lands Enrolled in Agricultural Districts (acres)
Cayuga County Agricultural District 5	3,961

Figure 15-1 depicts all properties enrolled in a New York State Certified Agricultural District within the Facility Site and the 5-mile Study Area.

## **(2) Land Receiving Real Property Agricultural Value Assessment**

As mentioned above, agricultural lands may qualify for a tax break through the agricultural value assessments program. Land taxes are based on current land use and are determined by the Town Assessor, independent of the agricultural district. A total of 33 parcels within the Facility Site are enrolled in the agricultural value assessment program. Additionally, 73,162 acres associated with 1,092 parcels within the 5-mile Study Area are enrolled in the agricultural value assessment program (72% of the 5-mile Study Area). Figure 15-1 depicts parcels receiving real property agricultural value assessment within the Facility Site and 5-mile Study Area.

Shapefiles of all parcels within the 5-mile Study Area that are enrolled in a certified Agricultural District or that received a Real Property Agricultural Value Assessment, are being submitted with this Application.

## **(3) Compliance with Local Zoning**

The Facility Site is proposed in areas zoned for Agricultural and Residential Uses in the Town of Scipio. Currently, there is no adopted zoning ordinance in the Town of Venice. Figure 3-6 depicts mapped zoning districts that intersect the Facility Site.

The objective of the Town of Scipio's Agricultural/Residential District (ARD) is *"to allow for continued agricultural and residential uses at medium to low density, managed community growth in compact development patterns including clustered residential or agricultural business uses, with conservation of open space and farmland resources"* (Town of Scipio Zoning Ordinance, Section 3.01). As outlined in Section 11.04 of the Town of Scipio Zoning Ordinance, Commercial Wind Facilities may be permitted in the ARD district through a special use permit and site plan approval. Large-scale wind energy systems are an allowable use within the ARD District if the project meets the standards and regulations outlined in the NYSDAM's guidelines for mitigating construction impacts on agricultural land (Town of Scipio Zoning Ordinance, Section 11.07).

## **(4) Agricultural and Non-Agricultural Land Uses**

Figure 15-2 and Table 15-2 show the distribution of agricultural land uses throughout the Facility Site and 5-mile Study Area. According to the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS) Cropland Data Layer (USDA, 2023), the dominant agricultural uses within the 5-mile Study Area (by acreage) include corn, alfalfa, and grassland/pasture. Most agricultural

land within the Facility Site is devoted to alfalfa, corn, and grassland/pasture. To a lesser extent, agricultural lands in the Facility Site are also currently designated other hay/non alfalfa, winter wheat, and soybeans.

**Table 15-2. Agricultural Land Uses within the Facility Site and the 5-Mile Study Area**

Existing Uses	5-Mile Study Area		Facility Site	
	Acres	%	Acres	%
<b>Agricultural Uses</b>				
Corn	23,553.0	36	1180.5	38
Alfalfa	16,333.3	25	1300.8	42
Grassland/Pasture	9618.6	15	222.7	7
Soybeans	7702.1	12	53.2	2
Other Hay/Non-Alfalfa	3105.7	5	169.0	5
Winter Wheat	3053.7	5	143.6	5
Sweet Corn	607.5	<1	0.1	<1
Oats	262.0	<1	2.7	<1
Squash	139.6	<1	0.6	<1
Rye	119.4	<1	14.0	<1
Triticale	90.1	<1	1.0	<1
Clovers/Wildflowers	67.5	<1	5.8	<1
Pumpkins	62.6	<1	--	--
Double Crop Triticale/Corn	56.7	<1	1.0	<1
Barley	18.4	<1	--	--
Grapes	18.3	<1	0.7	<1
Sunflower	10.4	<1	--	--
Christmas Trees	9.9	<1	0.4	<1
Sorghum	9.8	<1	--	--
Dry Beans	6.3	<1	0.2	<1
Buckwheat	4.8	<1	--	--
Spring Wheat	4.6	<1	--	--
Apples	3.0	<1	--	--
Onions	1.2	<1	--	--
Blueberries	1.1	<1	--	--
Potatoes	0.9	<1	--	--
Pears	0.8	<1	--	--
Cabbage	0.7	<1	--	--
Peas	0.7	<1	0.2	<1
Other Crops	0.7	<1	--	--
Speltz	0.2	<1	--	--
Aquaculture	0.2	<1	--	--
Sod/Grass Seed	0.2	<1	--	--
<b>Total</b>	<b>64,864.0</b>	<b>64</b>	<b>3,096.5<sup>2</sup></b>	<b>78</b>
<b>Non-Agricultural Uses<sup>1</sup></b>				
Deciduous Forest	21,014.5	57	649.3	73
Open Water	4460.4	12	6.2	<1
Developed/Open Space	3137.5	9	49.0	5
Woody Wetlands	3082.5	8	121.5	14
Developed/Low Intensity	2278.5	6	24.5	3
Mixed Forest	1161.3	3	14.0	2
Evergreen Forest	709.1	2	7.1	<1

Existing Uses	5-Mile Study Area		Facility Site	
	Acres	%	Acres	%
Developed/Medium Intensity	519.2	1	9.1	1
Developed/High Intensity	144.6	<1	1.6	<1
Herbaceous Wetlands	97.5	<1	2.6	<1
Shrubland	88.2	<1	3.9	<1
Barren	24.4	<1	2.4	<1
Fallow/Idle Cropland	24.1	<1	1.0	<1
<b>Total</b>	<b>36,741.8</b>	<b>36</b>	<b>892.2<sup>2</sup></b>	<b>22</b>

Source: USDA National Agricultural Statistics Service Cropland Data Layer, 2023

<sup>1</sup>Non-agricultural land uses within the NASS dataset are derived from the 2021 National Land Cover Dataset (NLCD) which presents more general cover types than those defined in Exhibit 11 (Terrestrial Ecology), shown in Figure 11-1, and presented in Table 15-5.

<sup>2</sup>Pixels that comprise the clipped Cropland raster extend beyond Facility Site boundary and account for the discrepancy in acreage.

As indicated in Table 15-1, there are 64,864.0 acres of agricultural land uses within the 5-mile Study Area and 3,096.5 acres within the Facility Site. As depicted in Figure 15-6 and discussed further below, 238 acres of agricultural

land will be temporarily taken out of agricultural production during construction, 60 acres will be temporarily impacted during construction and operations, and 2 acres will be permanently removed from agricultural production. Temporarily impacted areas will be restored and returned to agricultural use, at the discretion of the landowner following construction or decommissioning. In total, permanent impacts associated with the construction and operation of the Facility represent approximately 0.003% of the agricultural use within the 5-mile Study Area and 0.08% of the agricultural use within the Facility Site.

## (5) Existing Energy Infrastructure and Completed Renewable Energy Facilities

Figure 3-4 illustrates existing energy infrastructure within the 5-mile Study Area along with the proposed Facility. The Facility will connect to the existing 115 kV Wright Avenue-Milliken electric transmission line, which is owned and operated by NYSEG and runs north to south through the western portion of the Facility Site. There are no renewable wind energy facilities within the 5-mile Study Area. An analysis of cumulative impacts to agricultural soils associated with the proposed Facility and existing facilities is provided in Section (a)(8) and Table 15-6. See Exhibit 3 and Figure 3-7 for additional detail on the renewable energy generating facilities located in the 5-mile Study Area.

## (6) Active Agricultural Businesses

The total number of farms in Cayuga County decreased by 16.6% between 2012 and 2022 (USDA, 2012; USDA, 2022). The total land in farms decreased by 6.6%, and the average farm size increased by 11.2%. The total market value of products sold by farms in Cayuga County increased by 57.4% between 2012 and 2022. Despite decreases in the number of farms and total land in farms between 2012 and 2022, agriculture remains a stable industry in Cayuga County due to the significant growth in the value of the agricultural products sold. With decreases in the total number of farms, land dedicated to farming, and



average farm size, it can be inferred that smaller farms may be consolidating or being acquired by larger operations that are able to take advantage of economies of scale (USDA, 2012; USDA, 2022).

The Facility and the 5-mile Study Area required for consideration by the regulations under 16 New York City Rules and Regulations (NYCRR) Section 1100-2.16(a) do not extend outside of Cayuga County.

**Table 15-3. Study Area Agricultural Census Summary 2012-2022**

Metric	2012	2017	2022	Percent Change (%)
<b>Cayuga County</b>				
Number of Farms	891	842	747	-16.6
Land in Farms (acres)	238,444	225,204	222,764	-6.6
Average Farm Size (acres)	268	267	298	+11.2
<b>Total Market Value of Products Sold (\$)</b>	<b>293,474,000</b>	<b>287,853,000</b>	<b>461,927,000</b>	<b>+57.4</b>

Source: USDA Census of Agriculture for Cayuga County, 2012, 2017, and 2022

Between 2012 and 2022, the distribution of sales between livestock and crops in Cayuga County shifted slightly towards more livestock and fewer crops (see Table 15-4) (USDA, 2012; USDA 2022). Livestock generates most of the total value of agricultural sales (82%). Poultry, eggs, cattle, and milk from cows are the most valuable products, representing 99% of the total value of all livestock, poultry, and products sold in 2022. The most important agriculture crops in Cayuga County are grains, oilseeds, dry beans, and dry peas, representing approximately 59% of the total value of all crops sold in 2022 (USDA, 2022).

**Table 15-4. Study Area Value of Agricultural Sales by Farming Type**

Type	2012	Percent of total (%)	2022	Percent of Total (%)
<b>Cayuga County</b>				
Livestock, Poultry, and Products	\$194,263,000	66	\$267,260,000	82
Crops	\$99,211,000	34	\$58,539,000	18
<b>Total</b>	<b>\$293,474,000</b>	<b>100</b>	<b>\$325,799,000</b>	<b>100</b>

Source: USDA Census of Agriculture for Cayuga County, 2012, 2022

Although the number of farms within Cayuga County has declined since 2012, the value of products produced has continued to grow substantially. Approximately 300 acres (0.1%) of agricultural lands in Cayuga County are proposed to be impacted during construction; however, 238 acres (79% of the total impacted area) are anticipated to return to agricultural production during operations. Sixty acres (20% of the impacted area) of active agricultural land are anticipated to be temporarily impacted during operations and 2 acres are anticipated to be permanently impacted. Construction of the Facility is not anticipated to significantly impact existing agricultural operations or businesses within the Facility Site or 5-mile Study Area.

In evaluating impacts to agricultural businesses within the 5-mile Study Area, the Applicant incorporated the data summarized above and, in accordance with 16 NYCRR Section 1100-2.16(a)(6), reviewed the following publicly available resources and databases to identify agricultural businesses and facilities within the 5-mile Study Area: New York State Agriculture and Markets Farm Directory,

United State Department of Agriculture Local Food Directories, United States Department of Agriculture National Agriculture Statistics Service, and New York State GIS Clearinghouse. The Applicant also reviewed publicly available Google Earth maps and tax parcel data. A total of 52 agricultural businesses within the 5-mile Study Area were identified. Five of these businesses are located within the Facility Site: Roach Farm, Venice View Dairy Inc, Venice View Farms LLC, Aldrich Farm LLC, and Hatfield Farms LLC (see Figure 15-1).

As indicated in the landowner responses to the Agricultural Survey (discussed further herein), lease payments made by the Applicant to the landowners within the Facility Site may provide opportunities to support agricultural business growth and investment. More generally, payments made by the Applicant to taxing jurisdictions that intersect the Facility have the potential to support the region economically (see Exhibit 18). In addition, considering these benefits, and the limited temporary and permanent impacts that the Project will have on active agricultural lands during operations (an estimated 2% of active agricultural lands within the Facility Site) the Facility is not anticipated to negatively impact existing agricultural land uses or businesses activities within the Facility Site or within the 5-mile Study Area during operation. The locations and names of all agricultural businesses identified within the Study Area are shown on Figure 15-1 and provided as an ESRI shapefile with this Application.

To better understand potential impacts of the Facility on agricultural businesses and operations, a survey was distributed in Spring of 2024 to all participating landowners with parcels that contain active agricultural land that host Facility components. The purpose of the survey was to determine how the Facility may impact agricultural operations for participating landowners. The Applicant received responses from all the landowners surveyed.<sup>2</sup> Of the 36 complete surveys received, 35 (97%) indicated at least one active agricultural land use occurring on the property in the last five years (2019 – 2024). One of the 36 surveys (3%) indicated inactive (for agriculture) or did not provide land use data within the last five years; see Appendix 15-A for copies of the Agricultural Survey correspondence.

Of the 36 responses from landowners indicating recent or existing agricultural use, 13 landowners indicated no change to existing land use is expected to result from the development of the proposed Facility. One landowner who produces crops, livestock, and livestock products indicated that they may need to navigate equipment around infrastructure, in coordination with neighbors. The remaining landowners did not indicate whether the proposed Facility would affect existing agricultural land use on their parcel.

As discussed further in Exhibit 15(a)(7), no agricultural lands in Cayuga County are proposed to be permanently impacted by the Facility. As stated above, all landowners that responded to the Agricultural Survey plan to continue agricultural operations on lands owned both inside and outside of the Facility Site. Removal of a portion of these lands from agricultural use to host the Facility will not have a significant adverse effect on the greater agricultural economy locally or in the region. The Facility will

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<sup>2</sup> Responses were received from more than 90% of landowners; however, one landowner grouped the same parcel into two surveys, resulting in a total of 36 complete surveys, received.

support participating landowners in their continued agricultural operations both on lands associated with the Facility and those that are not, through the issuance of lease payments.

## **(7) Potential Construction Impacts and the Methods Available to Facilitate Farming Activity During Construction**

Construction of the Facility will result in some impacts to agricultural operations and farming practices.

- Permanent Impacts
  - Areas impacted by the Facility that will be permanently taken out of agricultural production (i.e., areas where agricultural production will not be capable of resuming post-decommissioning).
  - The only area within the Facility Site that will not be returned to pre-construction conditions, or equivalent, following decommissioning is the point of interconnection (POI) switchyard, which will be transferred to NYSEG following construction. The POI switchyard will permanently impact approximately 2 acres or 0.07% of the active agricultural lands within the Facility Site.
- Temporary Impacts During Operations
  - Areas impacted by the Facility that will be temporarily taken out of agricultural production during construction and operations.
  - These impacts would occur within (1) graded areas with finish grade of greater than or equal to 8% (high-slope grading), (2) impervious surfaces that will not be removed post-construction (e.g., access roads, crane pads, O&M facility, etc.), (3) stormwater management practice areas that will be maintained by the Applicant during operations, and (4) orphaned farmland (i.e., areas where farming practices are unlikely to resume during operations as a result of high-slope grading, impervious surfaces, or stormwater practices isolating or impeding access to portions of currently active farmland).
  - For the purposes of the impact analysis outlined in this exhibit, orphaned farmland is defined as active agricultural land that will not be accessible by typical farm equipment. A turning radius of 40 feet was assumed for equipment operating in row cropland and a turning radius of 20 feet was assumed for equipment operating in field cropland.<sup>3</sup>
- Temporary Impacts During Construction
  - Areas impacted by the Facility will be temporarily taken out of agricultural production until the end of the construction period, at which point they will be restored and returned to agricultural use.

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<sup>3</sup> These metrics were derived from agricultural field dimensions and evident turning radii of equipment currently being utilized within the Facility Site. No equipment turning radii were assumed for pastureland as high-slope areas and impervious surfaces do not prohibit livestock access.

- These impacts would occur in areas within the Limits of Disturbance that will be restored post-construction. Slopes with a finish grade of greater than or equal to 8%, impervious surfaces that will not be removed post-construction, and orphaned farmland are not included within the bounds of this impact type.

To ensure agricultural practices can resume post-construction, areas that are temporarily disturbed and where agricultural production will resume post-construction will be restored in accordance with the Agricultural Plan provided in Appendix 15-B and the New York State Department of Agriculture and Markets (NYSAGM) *Guidelines for Agricultural Mitigation for Wind Power Projects* (Revision 10/18/2019).

The Applicant proposes to minimize impacts to agricultural resources by installing buried collection lines that cross agricultural fields in accordance with the NYSAGM guidelines to assure that impacts to active agricultural land are minimized to the extent practicable. Potential impacts to buried agricultural drainage infrastructure will be repaired in accordance with the Applicant's Drainage Remediation Plan (Appendix 15-C), which is further described in Section (d). In addition, the Applicant will coordinate with landowners to minimize disruption to farming activities to the extent practicable throughout the duration of construction. Compensation will be provided for any unanticipated crop loss.

Once the Facility is operational interference with ongoing farming operations will be limited, aside from occasional maintenance and repair activities. Access roads built for the Facility will be available for use by farmers for equipment access to active fields, should it be requested by a participating landowner.

## **(8) Impacts to Agricultural Production Areas**

Agricultural production areas (i.e., active agricultural lands) comprise approximately 2,909 acres or 73% of the 3,989-acre Facility Site.<sup>4</sup> A discussion of impacts to various agricultural resources and lands is provided throughout this section. Table 15-5 provides a comprehensive summary of temporary and permanent impacts<sup>5</sup> to agricultural production areas and Mineral Soil Groups (MSG)<sup>6</sup> within the Facility Site and the acres of agricultural areas within various relevant geographic extents.

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<sup>4</sup> The active agricultural area calculations provided in this exhibit differ from those presented in Exhibit 11 as wetlands found within active agricultural areas have been merged with the broader agricultural area they are found within in this exhibit. In Exhibit 11 wetlands are considered as a distinct ecological community type.

<sup>5</sup> As defined in Exhibit 15(a)(7).

<sup>6</sup> The New York State Agricultural Land Classification System (NYSLCS) classifies each soil's inherent capability for agricultural production into one of 10 specifically ranked "Mineral Soil Groups (MSG)". The highest quality soil-types with the best sustained capability for agriculture comprise soil group 1. Conversely, those soils least suited for farming are classed in MSG 10. The State Division of Equalization and Assessment employs the NYSLCS to calculate land value per individual soil-type based on its capability for agricultural production. This provides the standard for the agricultural tax assessment system.

Table 15-5. Impacts to Agricultural Production Areas and Mineral Soil Groups Relative to Various Geographic Extents.

Agricultural Area	Facility Site					5-Mile Study Area (acres)	Town of Venice (acres)	Town of Scipio (acres)	Cayuga County (acres)	New York State (acres)
	Perm Impact <sup>1</sup> (acres)	Temp Impact During Construction <sup>2</sup> (acres)	Temp Impact During Operations <sup>2</sup> (acres)	No Impact (acres)	Total (acres)					
Agricultural Production Areas <sup>3</sup>										
Annual Row Crops	2.0	213.7	55.3	2,442.0	2,713.0	55,224.3	16,246.8	16,268.4	169,283.3	n/a
Perennial Field Crops <sup>4</sup>	0.0	20.8	4.6	125.0	150.4	9,880.8	2,040.1	2,018.2	62,001.5	n/a
Pastureland	0.0	3.9	0.0	41.7	45.6					
Total	2.0	238.3	59.9	2,608.7	2,909.0	65,105.1	18,286.9	18,286.6	231,284.8	6,434,762.4
Mineral Soil Group										
Group 1	0.0	0.0	0.0	0.0	0	1,492.2	430.5	95.0	4,567.3	1,879,144.0
Group 2	3.0	168.6	41.1	1,894.1	2,106.9	50,070.4	11,946.9	14,673.8	112,728.9	1,815,434.6
Group 3	0.4	72.1	13.6	665.9	752.0	18,444.0	4,944.2	2,771.7	77,797.1	1,717,480.7
Group 4	0.0	0.8	0.0	18.7	19.5	1,626.9	93.1	202.8	28,825.3	306,176.2
Total	3.4	241.5	54.8	2,578.7	2,878.4	71,633.5	17,414.7	17,743.3	223,918.6	5,718,235.5
Groups 5-10	0.2	48.7	10.9	1,051.2	1,110.9	36,273.1	8,831.7	5,562.6	199,012.0	31,101,882.2
Agricultural Production Areas within Mineral Soil Groups 1-4										
Annual Row Crops	1.9	177.8	45.7	1,939.6	2,165.0	43,125.7	12,237.4	13,607.3	112,729.4	n/a
Perennial Field Crops	0.0	20.8	4.5	116.2	141.5	5,886.2	1,247.6	1,487.7	32,538.0	n/a
Pastureland	0.0	1.7	0.0	26.0	27.7					
Total	1.9	200.3	50.3	2,081.7	2,334.3	49,021.9	13,485.0	15,095.0	145,267.4	n/a

<sup>1</sup> As defined in Exhibit 15(a)(7).

<sup>2</sup> As defined in Exhibit 15(a)(7). Note: approximately 0.7 and 1.7 acres of impacts to perennial field crops and annual row crops, respectively, are located outside the Facility Site. These impacts are generally associated with the installation of temporary intersection improvements.

<sup>3</sup> Agricultural production areas (i.e., active agricultural lands) within the Facility Site have been extracted from the site-specific ecological communities layer developed for the project. Agricultural production areas for all other geographic areas have been extracted from the 2019 National Land Cover Database (NLCD).

<sup>4</sup> The 2019 NLCD data used in making agricultural area calculations outside the Facility Site does not differentiate between perennial field crops (i.e., hayland) and pastureland. Therefore, these classes were grouped for areas outside the Facility Site.

As presented in Table 15-5, construction of the Facility will result in an estimated temporary disturbance during construction of approximately 238.3 acres (8%), temporary disturbance during construction and operations of approximately 60 acres (2%), and permanent disturbance of approximately 2 acres (0.07%) to agricultural production within the Facility Site. No agricultural production areas within the Facility Site will be permanently taken out of production (see Exhibit 15(a)(7) for a definition of temporary and permanent impacts to agricultural areas.

Of the total acreage of agricultural production areas within the Facility Site, 2,082 acres (80%) is classified as MSGs 1-4; the remaining 20% of agricultural production areas within Facility are classified in group 5 or greater. The 253 acres of MSG 1-4 soils in agricultural production areas that will be temporarily or permanently impacted by the Facility represent approximately 11% of MSG 1-4 soils in agricultural production areas within the Facility Site, 0.5% within the 5-mile Study Area, and less than 0.02% within Cayuga County. Areas within the Facility Site with the potential to be temporarily or permanently impacted by the Facility represent a very small fraction of agricultural production lands within the Facility or the region.

The Applicant conducted an analysis of cumulative impacts to MSGs 1-4 resultant from the operation of the Facility and all other operating renewable energy projects within the 5-Mile Study Area. No existing or proposed wind or solar energy generating facilities have been identified within the 5-mile Study Area.<sup>7</sup>

### ***(9) Avoidance, Minimization, and Mitigation of Agricultural Impacts***

Although the majority of the Facility Site is comprised of active agricultural lands, the Applicant made a concerted effort, through careful iteration of the proposed Facility's layout and design in coordination with producers, to avoid impacts to significant agricultural resources, to the maximum extent practicable. Avoidance of impacts is limited by the need to develop the Facility within lands made available by participating landowners, balanced also by the need to avoid other sensitive resources, while maintaining a design capacity up to 99 MW, as required by contracts with New York State Energy Research and Development Authority (NYSERDA). Table 15-7 provides a detailed summary of all efforts made by the Applicant to avoid and minimize temporary permanent impacts to agricultural resources.

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<sup>7</sup> ConnectGen is developing a large-scale solar project in the Towns of Genoa and Venice (<https://www.harvesthillsolar.com/>). However, no publicly available information has been released on the layout and design of this potential project or its permitting timeline.

Table 15-7. Agricultural Resource Impact Minimization Design Revisions.

Facility Component(s)	Description of Design Revision
Wind Turbine #1 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences<sup>8</sup> and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed to follow an existing farm road along the field edge and improve existing stream crossings, to the extent practicable. Access road also routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #2 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field that meets producer requirements and minimizes farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed along field edge and partially through a forested area to minimize field losses.</li> </ul>
Wind Turbine #3 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area that minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction and meets producer requirements.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #4 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field, adjacent to but not within a forested wetland to meet producer requirements and minimize farmland orphaning once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>

<sup>8</sup> Throughout the course of the development of the Facility, the Applicant has had many conversations with landowners/producers, wherein specific preferences for minimizing agricultural impacts have been communicated and considered. This table identifies specific steps the Applicant has taken to revise the design of the Facility, where applicable, in coordination with landowners/producers to minimize agricultural impacts to the maximum extent practicable.

Facility Component(s)	Description of Design Revision
Wind Turbine #5 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #6 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed along the edge of the field parallel to a riparian corridor and parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #7 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #8 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>



Facility Component(s)	Description of Design Revision
Wind Turbine #9 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #10 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that avoids wetland impacts, meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #11 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that avoids wetland impacts, meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #12 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area that minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction and meets producer requirements.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed along field edge and partially through a forested area to minimize field losses.</li> </ul>

Facility Component(s)	Description of Design Revision
Wind Turbine #13 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field, adjacent to but not within a forested wetland to meet producer requirements and minimize farmland orphaning once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #14 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road sited in follow an existing farm road for part of its length and routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #15 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area that minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction and meets producer requirements.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #16 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>

Facility Component(s)	Description of Design Revision
Wind Turbine #17 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #18, MET tower, ADLS tower, and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area in a manner that avoids all direct wetland impacts, minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction, and meets producer requirements.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• MET tower sited in field cropland, designed with no guy wires, and collocated with associated infrastructure to minimize agricultural impacts.</li> <li>• ADLS tower sited in a location that meets FAA requirements and maximizes site safety, while minimizing agricultural impacts through collocation with associated infrastructure in field cropland.</li> <li>• Access road routed serve all infrastructure in a manner that minimizes impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #19, MET tower, and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area in a manner that avoids all direct wetland impacts, minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction, and meets producer requirements.</li> <li>• MET tower designed with no guy wires and collocated with associated infrastructure to minimize agricultural impacts.</li> <li>• Access road sited in follow an existing farm road for part of its length and routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency, to the extent practicable considering turbine deliverability constraints.</li> </ul>
Wind Turbine #20 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road designed to minimize total length in active agricultural areas. Access road routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>

Facility Component(s)	Description of Design Revision
Wind Turbine #21 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to follow the existing field edge adjacent to a wetland and otherwise be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #22 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on adjacent to but not within nearby a stream and forested wetland and otherwise located to meet producer requirements and minimize farmland orphaning once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road sited on the field edge adjacent to a stream and routed in coordination with the producer to be parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #23 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location on the edge of the field and partially within a forested area in a manner that avoids all direct wetland impacts, minimizes direct agricultural impacts and farmland orphaning once the site has been restored post-construction, and meets producer requirements.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed in coordination with the producer to be on the edge of the field and parallel or perpendicular to farm equipment field use, to minimize impacts and disruptions to production efficiency.</li> </ul>
Wind Turbine #24 and associated infrastructure	<ul style="list-style-type: none"> <li>• Wind turbine sited in a location within the field that meets producer preferences and avoids farmland orphaning, once the site has been restored post-construction.</li> <li>• Wind turbine delivery pad will be regraded post-construction to limit temporary impacts during operations to just the area around the turbine foundation and the crane pad.</li> <li>• Access road routed to follow a farm road and the field edge, to the extent practicable.</li> </ul>

Facility Component(s)	Description of Design Revision
Collection Line and Junction Boxes	<ul style="list-style-type: none"> <li>• All collection lines on active agricultural lands have been sited underground. The one short section of overhead collection line proposed by the Applicant has been sited in non-agricultural areas to completely avoid any impacts to ongoing agricultural production.</li> <li>• Collection lines have been collocated with access roads and existing farm roads to minimize associated soil disturbance, to the extent practicable.</li> <li>• Junction boxes have been sited in non-agricultural areas or at the edges of the fields to avoid and minimize impacts to agricultural operations, to the extent practicable.</li> </ul>
Collection Substation, POI Switchyard, O&M Facility, and associated infrastructure	<ul style="list-style-type: none"> <li>• The collection substation, POI switchyard, and O&amp;M facility were optimally sited on the edge of an active farm field in a partially forested area where wetland, cultural, agricultural, visual, sound, and other impacts have been avoided to the maximum extent practicable.</li> <li>• The access roads for the collection substation, POI switchyard, O&amp;M facility, Wind Turbine #13, and Wind Turbine #14 were all collocated, and large portions of the collocated access road was sited along an existing farm road to minimize agricultural impacts.</li> </ul>

In addition to these specific impact minimization measures, various measures to protect and restore agricultural lands and farming operations within the Facility Site will be undertaken during and after construction, including full restoration of temporarily disturbed agricultural land (see Figure 15-6) in accordance with the Agricultural Plan (Appendix 15-B), which was developed by the Applicant based on NYSAGM Guidelines. The Applicant and/or a designated third-party Agricultural Monitor will consult with the NYSAGM during construction if deviation from the approved plan is necessary. In addition, the Applicant will continue to consult with landowners and the NYSAGM throughout the Article VIII process and during construction and operation of the Facility to ensure impacts to active agricultural land and farming operations are avoided, minimized, and/or mitigated to the extent practicable.

For example, stripped topsoil in active agricultural areas will be stockpiled from work areas and kept separate from other excavated material (rock and/or sub-soil) until the completion of Facility construction and site restoration. All topsoil will be stockpiled as close as is reasonably practical to the areas where it was stripped/removed and will be used for restoration on that particular area. Proposed access will be established as soon as possible to limit temporary disturbance and avoid impact to undisturbed soils. All temporarily disturbed agricultural soils will be restored following construction. This process will generally involve the following sequence of activities:

1. Decompaction of compacted subsoils to a depth of 18 inches using a deep ripper or heavy-duty chisel plow.
2. Disking and removal of stones (four inches and larger in size) from de-compacted subsoil.

3. Spreading of stockpiled topsoil over the de-compacted subsoil and reestablishing pre-construction contours to the extent practicable.
4. Discing and removal of stones (four inches and larger in size) following the spreading of topsoil.
5. Seeding in restored agricultural fields will be based on guidance provided by the landowner and NYSAGM personnel.
6. Regrading all access roads to restore original surface drainage patterns or other drainage patterns incorporated into the design, as determined by the Soil and Water Conservation District and the landowner.

The Applicant will also provide monitoring and remediation of restored agricultural land, as necessary, for two complete growing seasons following the date upon which the agricultural area achieves the establishment of the desired crop. The two-year period will allow for observation of impacts that may not be obvious at the end of construction or only may become evident as a result of the effects of frost action, precipitation, and crop growth. The monitoring and remediation phase will be used to identify any remaining agricultural impacts associated with construction that need to be addressed and to implement follow-up restoration. General conditions to be monitored include topsoil thickness, relative content of rock and large stones, trench settling, crop production, drainage, and repair of fences. Impacts will be identified by the Agricultural Monitor through on-site monitoring of all agricultural areas impacted by construction and through contact with the affected farm operators and the NYSAGM. See Section 15(d) for further discussion on impacts to drainage tiles.

There is one regulated area in Cayuga County that has been quarantined due to Golden Nematode (*Globodera rostochiensis*); a soil-borne insect pest that damages potato crops (USDA, 2022b). No regulated areas are present within the Facility Site or 5-mile Study Area. Best management practices (BMPs) from the USDA Animal and Plant Health Inspection Service are typically required to prevent inadvertent transportation of potentially contaminated soils that may result from the construction and operation of the Facility. These BMPs include strict sanitation of vehicles and equipment, pressure-washing to remove soil, and for equipment with difficult to reach areas, a steam under tarpaulin treatment or fumigation to ensure equipment is nematode-free.

## **(b) Maps**

### **(1) Field-Verified Active Agriculture Land Use**

Figure 15-2 depicts active agricultural land use within the 5-mile Study Area, which includes land involved in the production of crops, livestock, and livestock products during at least three of the last five years. Approximately 64,864 acres (64%) of the 5-mile Study Area is identified as active agricultural land.

As mentioned previously, the Applicant has consulted with the landowners of parcels that comprise the Facility Site through a landowner survey. The Survey questionnaire requested landowners provide: 1) an indication of the agricultural land uses that have taken place on their property in the last five years; 2) and indication of the current agricultural land use on the property; 3) a description of how existing

agricultural operations will be affected post-construction; 4) confirmation of any drainage tile infrastructure on their property, and a sketch of the location of any drainage tile infrastructure; and 5) a solicitation of additional comments (see Appendix 15-A).

The Applicant verified the location and extent of active agricultural land during on-site surveys, including wetland, archaeological, and avian field surveys. Data points and photos collected during on-site surveys informed the delineation of active agricultural land within the Facility Site. As indicated in Exhibit 15(a)6 and (a)7, active agricultural land represents an estimated 73% (2,909 acres) of the Facility Site. The Applicant utilized information from the agricultural survey and spatial data to limit temporary impacts during operations and permanent impacts to approximately 62 acres, 2% of the agricultural land within the Facility Site. Access to these areas will not be impeded and agricultural operations may continue.

The Applicant will implement the New York State Department of Agriculture and Markets Guidelines for Agricultural Mitigation for Wind Power Projects (Revised 10/18/2019), to mitigate potential impacts to active agricultural land.

## **(2) Agricultural Production Acreage Proposed to Remain in Agricultural Use**

Agricultural land within the Facility Site not proposed to host Facility components is expected to remain in active agricultural use, unless otherwise decided upon by the landowner. As described above, within the 5-mile Study Area, 64,864 acres (approximately 64% of the 5-mile Study Area) is identified as active agricultural land. Temporary impacts to active agricultural land during operations and permanent impacts total 60 acres and 2 acres, respectively. The remaining 238 acres of active agricultural land within the 5-mile Study Area would be able to return to agricultural production once the Facility is operational.

Various measures to protect and restore agricultural lands and farming operations within the Facility Site will be undertaken during and after construction and will include full restoration of temporarily disturbed agricultural land in accordance with the Drainage Tile Remediation Plan (Appendix 15-C) and Agricultural Plan (Appendix 15-B), which were developed by the Applicant based on NYSAGM Guidelines. At the end of the Facility lifespan, Facility components will be decommissioned, and the land restored, consistent with 16 NYCRR Section 1100-6.6(a) requirements, as described in Exhibit 23 of this Application. Following completion of decommissioning and restoration, agricultural lands within the Facility Site are expected to return to pre-construction use, depending on the intentions of the landowners.

## **(3) Landowner-Imposed Development Restrictions**

No specific landowner-imposed development restrictions are identified in this Application. However, as detailed throughout this exhibit, the Applicant has coordinated closely with landowners/producers to design the Facility in a manner that minimizes impacts to ongoing agricultural operations.

## **(4) Locations of Known or Suspected Drainage Systems**

As part of the agricultural landowner survey, the Applicant consulted with the landowners of parcels that comprise the Facility Site to obtain specific information on the location of drainage systems.<sup>9</sup> Responding landowners indicated if the parcels included drain systems, which fields contained drainage systems, and presented the information graphically in their response, if they chose to. This information was supplemented by geospatial information gathered by field crews regarding the locations of surface drainage systems.

To supplement data collected within the Facility Site from landowners and over the course of the field surveys, a dataset from the National Center for Atmospheric Research (NCAR) was utilized to assess the potential for drainage systems within the larger 5-mile Study Area; see Figure 15-4. The NCAR data use multiple USDA and USGS datasets to show a 30-meter resolution layer of suspected drain tile areas (Valayamkunnath et al., 2020). The Applicant also contacted the Cayuga County Soil and Water Conservation District (SWCD) and the United States Department of Agriculture Natural Resources Conservation Service (NRCS) early in the development cycle to obtain any available information on surface or subsurface drainage. The Cayuga County SWCD responded stating that they do not keep records of any tile drainage systems; no response was received from the NRCS.

Surface drainage features are discussed in the Drainage Remediation Plan (Appendix 15-C), as well as Exhibit 13 and Exhibit 14. Non-jurisdictional surface drainage features are identified in Appendix 15-C; jurisdictional surface drainage features are depicted in Figure 14-1. No unique agricultural drainage facilities were specifically identified at the Facility Site.

The Applicant has prepared a Drainage Remediation Plan to address unavoidable or inadvertent damages to drainage systems within the Facility Site during construction (Appendix 15-C). This Plan is discussed in Section (d).

## **(5) USDA Soil Mapping**

Soil types within the Facility Site were identified using data from the USDA NRCS Soil Survey Geographic (SSURGO) Database (Soil Survey Staff, 2023). A description of the soil types within the Facility Site and their characteristics are provided in Exhibit 10 (Geology, Seismology, and Soils). See Figure 10-3 for a map delineating soil types within the Facility Site.

## **(6) NYS Agricultural Land Classification Mineral Soil Groups for Impacted Agricultural Areas**

Figure 15-5 depicts MSG 1-4 soils and MSG 5-10 soils within the Facility Site. See Table 15-5 and Exhibit 15(a)(8) for a further discussion of the Facility impacts on MSG soils and Exhibit 10 for information on the Facility's impacts to soils more generally. See Figure 15-5 for a map depicting the NYS agricultural

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<sup>9</sup> The accuracy of the spatial data on the location and arrangement of drainage systems within the Facility Site is dependent on the quality of the data obtained from landowners or publicly available resources (e.g., aerial imagery).



land classification system MSGs 1 through 10 within the Facility Site. In addition, Section (a)(8) presents the anticipated impacts to agricultural production areas, including MSG.

### **(c) Agricultural Plan**

As mentioned above, the Applicant prepared an Agricultural Plan (Appendix 15-B), consistent with the NYSAGM *Guidelines for Agricultural Mitigation for Wind Power Projects* (Revision 10/18/2019), to avoid, minimize, and mitigate impacts to active agricultural lands within MSG 1-4 during the construction, restoration, post construction monitoring and remediation, and decommissioning phases of the Facility. Within the Facility Site, there are approximately 2,334.3 acres of MSG 1-4 soils in agricultural production areas. Of those, 9% (200.3 acres) will be temporarily impacted during construction, 2% (20.3 acres) will be temporarily impacted during construction and will be taken out of agricultural use while the Facility is in operation, and less than 0.01% (1.9 acres) will be permanently impacted. Figure 15-6 shows the active agricultural lands within MSGs 1-4, to which the Agricultural Plan would apply.

### **(d) Drainage Tile Remediation Plan**

The Applicant has prepared a Drainage Remediation Plan to address inadvertent damages to drainage features (Appendix 15-C). The potential impacts to drainage systems and process for identification and repair of the drainage features are summarized below, and further described in Appendix 15-C.

#### **(1) Demonstration of the Likelihood of Impacts to Surface/Subsurface Drainage**

The steps taken by the Applicant to identify the locations of known or suspected drainage systems are discussed in Exhibit 15(b)(4). In total, approximately 20 surface/subsurface drainage systems have been identified within the Facility Site (see Figure 15-4). Based on the NCAR data, several additional parcels within the Facility Site have the potential to host sub-surface drainage infrastructure (Valayamkunnath et al., 2020).

Prior to construction, the location of all known systems will be identified in the field to facilitate the avoidance, minimization, and mitigation of impacts to these systems. While identification of existing drain tile systems can aid in minimizing impacts, impacts cannot feasibly be ruled out. The Applicant will follow the procedures outlined below and in the Drainage Tile Remediation Plan (Appendix 15-C) should any drainage systems become damaged or need repair during construction or decommissioning of the Facility. It is anticipated that drainage systems that serve lands that will remain in agricultural production will not negatively be impacted by the construction of the Facility. The Applicant is not aware of any drain tile systems that could be impacted by the Facility that extend outside the Facility Site onto non-participating parcels.

Impacts to non-jurisdictional surface drainage features are discussed in the Drainage Remediation Plan; impacts to jurisdictional surface drainage features are discussed in Exhibit 13 (Water Resources and Aquatic Ecology) and Exhibit 14 (Wetlands). As discussed in these materials, Facility components have been sited to avoid impacts to surface drainage features to the maximum extent practicable.

## **(2) Identification of Methods of Repair for Damaged Drainage Features**

Drainage systems that are damaged during the construction and operation of the Facility will be repaired in accordance with NYSAGM Guidelines and the Drainage Remediation Plan. The Applicant will implement any required corrective measures throughout operation of the Project, including the implementation of the Decommissioning and Site Restoration Plan (Exhibit 23 and Appendix 23-A) and in response to any issues identified through the complaint resolution process described in the Applicant's approved Complaint Management Plan which will be submitted as a pre-construction compliance filing consistent with 16 NYCRR Section 1100-10.2 (e)(7) requirements.

### **(e) Co-utilization Plan**

As indicated in Exhibit 15(a)(6) and (a)(9), the Applicant worked closely with landowners to carefully site linear Facility components (e.g., access roads and collection lines) in areas that would allow the landowners to continue any desired farming practices. Wind turbines are largely constrained by wind resources, setbacks, and environmental constraints. The Applicant was able to site linear Facility components in a way that minimized the Facility's impacts. The Applicant is proposing to install collection lines underground to the maximum extent practicable; there will be no impacts to agricultural lands during operations as a result of the installation of the buried collection lines. Facility access roads utilize existing farm lanes to the maximum extent practicable. In areas where access roads could not be collocated with existing farm lanes due to other environmental or engineering constraints (topography, delineated wetlands or streams, turning radius requirements), the Applicant sited the access roads in a way that would minimize impacts to agricultural lands, including selecting routes that would require less grading, crossing drainage infrastructure in a way that would allow continued use of the infrastructure, proposing drainage restoration details, and committing to restoring agricultural lands to pre-construction contours or slopes to allow the continued use of mechanized farming equipment.

As described in this Exhibit, the total acreage of land that will be taken out of agricultural production during operations will be approximately 50.3 acres, which represents approximately 1% of the Facility Site. Figure 15-6 shows the active agricultural land within MSG 1-4 that will be temporarily impacted by the Facility. The careful design and siting of the Facility will allow continued use of farmland for agricultural production in areas not utilized by Project components. The Applicant has also facilitated the potential for ongoing agricultural production by ensuring the Facility design does not impede access to agricultural fields by farming equipment (see Exhibit 15(a)(7) for a discussion of the commitments to agricultural restoration of agricultural areas temporarily disturbed during construction), and by limiting the potential for fragmentation of agricultural fields. Most landowners that responded to the agricultural survey described in Exhibit 15(a)(6) indicated that the Project would not have an adverse effect on the agricultural use of their land. Through the implementation of measures described throughout this exhibit, the Applicant has ensured that the Facility will not have an effect on continued agricultural land uses within the Study Area to the maximum extent practicable. The Facility itself represents a co-utilization of agricultural land. Therefore, an Agricultural Co-utilization Plan is not proposed for the Facility and the requirements of Section 1100-2.16(e) are not applicable.

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