



South Ripley
SOLAR PROJECT

ConnectGen Chautauqua County LLC

South Ripley Solar Project

Matter No. 21-00750

900-2.16 Exhibit 15

Supplement

Agricultural Resources

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EXHIBIT 15 AGRICULTURAL RESOURCES

(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 State-wide effort intended to preserve, protect, and encourage the development and improvement of the state's most valuable agricultural assets. The Agricultural Districts Law encourages the continued use of farmland for agricultural production by:

- Providing a framework to limit local regulation on farm practices;
- Modifying public agencies' ability to acquire land through eminent domain;
- Modifying the right to advance public funds to construct facilities that encourage development;
- Requiring state agencies to modify regulations to encourage farming; and
- To 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 and districts and allow continued use of certain farmland for agricultural production during operations, and/or allow the site to return to prior agricultural use following decommissioning.

State-certified Agricultural Districts encompass most of the land within the Town of Ripley and surrounding towns. Approximately 2,710 acres (80%) of the Facility Site are enrolled in Chautauqua County Agricultural District 1. Approximately 1,069 acres (84%) within the Facility's Limits of Construction Activity (LOCA) are enrolled in Chautauqua County Agricultural District 1. Within the 5-mile Study Area, approximately 49,810 acres (66%) are enrolled in four agricultural districts: Chautauqua County Agricultural Districts 1, 6, 7, and 8 (Chautauqua County Government, 2020; Cornell Institute for Resource Information Sciences, 2016). Figure 15-1 depicts agricultural district land within the Facility Site and 5-mile Study Area.

(2) Land Receiving Real Property Agricultural Value Assessment

As mentioned above, agricultural lands may qualify for a tax exemption 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. Parcels within the Facility Site receiving an agricultural tax exemption represent 40.6% of the total acres. Within the 5-mile study area, parcels receiving an agricultural tax exemption represent a similar

proportion of acres as the Facility Site (41%). Figure 15-1 depicts parcels receiving an agricultural value assessment tax exemption within the Facility Site and 5-Mile Study Area.

(3) Compliance with Local Zoning

The Facility Site will be located entirely within the Town of Ripley which adopted the Town of Ripley Zoning Law in 2017 (2017 Zoning Law). The Facility Site is located primarily within the Rural/Agricultural zoning district; however, there is a single collection line crossing of the Recreational/Conservation (REC/CON) zoning district.¹ According to Section 620-B.6.A of the current Town of Ripley Solar Energy Zoning Law, large-scale solar energy systems, such as the Facility, are permitted through issuance of a Special Use Permit within the Rural/Agricultural (Rural), Commercial (rural) (C-2), Manufacturing & Industry/Adult business (MI/A), and Residential (larger lot) (R-2) zoning districts.

In addition, after the Application was filed, the Town of Ripley adopted a new Solar Energy Zoning Law on September 9, 2021. As discussed in Exhibit 24, if ORES determines that the 2021 Solar Energy Zoning Law is applicable, the Applicant has determined that certain waivers will be needed due to unreasonably burdensome provisions. Waivers related to provisions governing vehicular paths, dielectric coolants, noise, lot size, setbacks, lot coverage, fencing, and screening and visibility. The Applicant will continue to coordinate with the Town of Ripley to ensure compliance with local zoning regulations or waivers are sought accordingly.

Figure 3-6 depicts zoning districts within the 5-mile study area. More information regarding local laws and zoning regulations and waivers can be found in Exhibits 3 and 24.

(4) Agricultural and Non-Agricultural Land Uses

The National Agricultural Statistics Service (NASS) Cropland Data Layer (USDA, 2021) is a Landsat based, 30-meter resolution land cover database generated by United States Department of Agriculture (USDA) and tracks agricultural land use across the United States. According to the Cropland Data Layer, the dominant agricultural uses within the Facility Site by area include grassland/pasture (17%), other hay/non-alfalfa (13%), and corn (1%). In total, agricultural uses within the Facility Site represent 32% of the land area while non-agricultural uses represent 68% of the land area. Agricultural land uses within the 5-mile Study Area are similar to the Facility Site with the dominant agricultural uses including other hay/non-alfalfa (11%), grassland/pasture (8%), grapes (4%), and corn (3%). In total, agricultural land uses in the 5-mile Study Area represent 27% of the total land area while

¹ No solar panels will be located on land within the REC/CON zoning district. There is an overhead collection line crossing the REC/CON zoning district in order to span Twentymile Creek. Given the REC/CON zoning districts position within the town, there are no alternative crossing points available to the Applicant, and the selected point represents the lowest impact option available.

non-agricultural land uses represent 73% of the total area. Figure 15-2 and Table 15-1 shows the distribution of agricultural land uses throughout the Facility Site and 5-mile Study Area, according to the NASS Cropland Data Layer.

Table 15-1. Comparison of Agricultural Land Uses between Facility Site and 5-Mile Study Area

| Existing Uses | Facility Site | | 5-Mile Study Area | |
|------------------------------|---------------|-------------|-------------------|-------------|
| | Acres | (%) | Acres | (%) |
| Agricultural Uses | | | | |
| Alfalfa | 8.7 | 0.3 | 140.3 | 0.2 |
| Other Hay/Non-Alfalfa | 428.1 | 12.7 | 7,965.3 | 10.6 |
| Wheat/Other Grain Crop | 46.0 | 1.4 | 389.8 | 0.5 |
| Corn | 17.8 | 0.5 | 2,163.2 | 2.9 |
| Soybeans | 3.1 | 0.1 | 434.1 | 0.6 |
| Grapes | 5.6 | 0.2 | 3,115.5 | 4.2 |
| Other Produce Crop | 0.0 | <0.1 | 16.1 | <0.1 |
| Fallow/Idle Cropland | 2.2 | 0.1 | 31.4 | <0.1 |
| Grassland/Pasture | 558 | 16.5 | 6,183.5 | 8.2 |
| Christmas Trees | 0.0 | 0.0 | 4.0 | <0.1 |
| Aquaculture | 0.0 | 0.0 | 0.0 | <0.1 |
| Total | 1073.0 | 31.7 | 20,442.8 | 27.3 |
| Non-Agricultural Uses | | | | |
| Forest | 2063.6 | 61.0 | 46,615.9 | 62.2 |
| Shrubland | 1.3 | <0.1 | 36.3 | <0.1 |
| Barren | 1.3 | <0.1 | 39.8 | 0.1 |
| Developed | 53.8 | 1.6 | 3,992.5 | 5.3 |
| Wetlands | 187.9 | 5.6 | 3,498.9 | 4.7 |
| Open Water | 3.3 | <0.1 | 367.6 | 0.5 |
| Total | 2307.9 | 68.3 | 54,511.2 | 72.7 |

Source: USDA National Agricultural Statistics Service Cropland Data Layer, 2020

The National Land Cover Dataset (NLCD) is a Landsat based, 30-meter resolution land cover database generated by United States Geological Survey (USGS) in cooperation with the Multi-Resolution and Characteristics Consortium (MRLC). According to the NLCD data, the Facility Site is predominately comprised of forestland (55%) and pasture/hay (35%) cover types. Forestland and pasture/hay are also the dominant land cover types within the 5-mile Study Area comprising approximately 58% and 22% of the total land area, respectively. The NLCD characterization of agricultural land use within and around the Facility Site is generally consistent with the agricultural uses depicted by the Cropland Data Layer and supports the conclusion that the Facility Site contains relatively little row crop, fruit, or other high-value agricultural use. See Exhibit 11 for additional information pertaining to land cover and plant communities.

(5) Existing Energy Infrastructure and Completed Renewable Energy Facilities

Figure 3-4 illustrates existing energy infrastructure within the 5-mile Study Area and proposed Facility components. The Facility will connect to the existing South Ripley to Dunkirk 230 kV transmission line, which traverses through the northwest corner of the Facility Site and is owned and operated by National Grid. Several natural gas pipelines cross the Study Area, including an interstate pipeline owned by Norse Pipeline LLC which traverses the eastern end of the Facility Site, and an intrastate pipeline operated by National Fuel Gas Distribution Company which traverses the center of the Facility Site. Based on a review of Chautauqua County parcels, NYSORPS land use classification data, and NYSDEC's database of existing and proposed renewable energy projects across New York State, there are currently no renewable energy facilities completed within the 5-mile Study Area at the time of this Application.

All underground utilities within the Facility Site will be located and clearly identified prior to construction and avoided during construction. No impacts to existing utility lines are anticipated. See Exhibit 20 for additional information pertaining to existing utilities and effects on communication.

(6) Active Agricultural Businesses

Agricultural-related business operations within the Facility Site include Parable Farm INC (Parable Farm), an organic dairy and livestock farm, and Cochran & Zandi Land, LLC (Cochran & Zandi), a lumber company. Parable Farm owns two parcels totaling 562 acres within the Facility Site. Based on NYSORPS land use classifications, these parcels include land classified as "agricultural vacant land (Land used as part of an operating farm. It does not have living accommodations and cannot be specifically related to any of the other divisions in the agricultural category. Usually found when an operating farm is made up of a number of contiguous parcels)" and land for "cattle, calves, hogs". The parcel hosting Parable Farm's cattle farm includes a residence, four dairy barns, two barn-pole, three silos, a quonset hut, an open porch, two trailers, and a shed-machine. The other parcel contains no agricultural related infrastructure or facilities. Cochran & Zandi owns 5 parcels that comprise 294 acres of the Facility Site. Three of the five parcels are classified as "abandoned agricultural land (nonproductive; not part of an operating farm)", one parcel is listed as "vacant residential vacant land greater than 10 acres", and the remaining parcel is classified as "other rural vacant lands (waste lands, sand dunes, salt marshes, swamps, rocky areas, and woods, brush or noncommercial tree species not associated with forest lands)". There are no agricultural related infrastructure or facilities identified on any of the five parcels. Additionally, as noted from results of the Landowner Agricultural Survey, several other landowners throughout the Facility Site use their land for personal farming and small-scale private operations (e.g., hay sales, dairy farming, horse training, cattle production).

The total number of farms in Chautauqua County has decreased by 25.9% between 2007 and 2017; the area of land dedicated to farming only decreased by 5.2%, but the average farm size increased by 28.2% during this same time period (Table 15-12). In addition, the total market value of products sold by farms in Chautauqua County increased by 16.2% between 2007 and 2017 and the percent of farms with annual sales in excess of \$100,000 increased slightly from 2012 (18.9%) to 2017 (19.9%). With a decrease in total number of farms, increase in farm size, and minimal change in land dedicated to farming, 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 (2012 USDA Census of Agriculture; 2017 USDA Census of Agriculture).

Table 15-2. Chautauqua County Agricultural Census Summary 2007-2017

| | 2007 | 2012 | 2017 | Percent Change (%) |
|--|-------------|-------------|-------------|--------------------|
| Number of Farms | 1658 | 1515 | 1228 | -25.9 |
| Land in Farms (acres) | 235,858 | 236,546 | 223,634 | -5.2 |
| Average Farm Size (acres) | 142 | 156 | 182 | 28.2 |
| Total Market Value of Products Sold (\$) | 138,578,000 | 161,849,000 | 160,967,000 | 16.2 |

Source: USDA Census of Agriculture 2012, 2017

The distribution of sales between livestock and crop farming remained relatively consistent between 2012 and 2017 (Table 15-3). Livestock generates slightly more than half of the total value of agricultural sales in the county with the most productive livestock activity being dairy. The most productive crops farmed in Chautauqua County, in terms of sale value, are fruits, tree nuts, and berries which represent more than half of the total value (\$42,556,000) of all crops sold. Grapes are a vital agricultural product within this category, and despite occupying less than half the acreage (16,953 acres) as lands used for forage (46,042 acres) within the county, they represent a significant portion of crop sales (USDA Agricultural Census 2012; USDA Agricultural Census 2017). It is important to note that grape vineyards, fruit orchards, and other high-value crops are concentrated outside of the Facility Site, and this segment of the agricultural economy in Chautauqua County is not expected to be impacted by the Project.

Table 15-3. Chautauqua County Value of Agricultural Sales by Farming Type

| | 2012 | Percent of total | 2017 | Percent of Total (%) |
|-----------|---------------|------------------|---------------|----------------------|
| Livestock | \$88,061,000 | 54.4 | \$87,710,000 | 54.5 |
| Crops | \$73,787,000 | 45.6 | \$73,258,000 | 45.5 |
| Total | \$161,848,000 | 100.0 | \$160,968,000 | 100.0 |

Source: USDA Census of Agriculture 2012, 2017

To better understand potential impacts of the Facility on agricultural businesses and operations, a survey was distributed in February and March of 2021 to all participating landowners hosting facility components. The purpose of the survey was to determine how the Facility may impact agricultural operations for participating landowners. Surveys were returned for 28 of the 48 parcels, resulting in a 58.3% response rate. Of those responding to the survey, the reported dominant agricultural uses within the Facility Site between 2016 and 2021 include field crops (48%), livestock and livestock products (approximately 24%), and timber (27%). Three of the 28 parcels (10.7%) did not have an active agricultural operation in 2021, and all parcels were used in agricultural production for at least one year between 2017 and 2021. Five of the 28 parcels (17.9%) were inactive for three or more years between 2017 and 2021.

Landowners for eight of the 28 parcels (28.6%) indicated that the entirety of their property would be used to host facility components following construction. Fifteen landowners (53.6%) indicated that they would continue active agricultural operations on their remaining land not used to host Facility components, and five indicated they plan to use their remaining land for non-agricultural uses (17.9%). Only one respondent indicated they would be seeking additional land to continue their existing operations following the construction of the Facility. One landowner with multiple parcels, citing the benefits of the proposed Facility, indicated that they believe “income generated by the installation will permit us [agricultural operators] to make better use of land not used by solar through the addition of amendments added to the hay ground. Less fuel for machinery [and] less time in harvesting.”

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

Construction of the Facility will necessarily result in impacts to agricultural activity within the Facility Site. These impacts include temporary vegetation and soil disturbance within the Facility’s limits of disturbance and long-term exclusion of agricultural activity within the fenced PV arrays and areas converted to access roads, pad-mounted

inverters, and the collection substation. The Limits of Construction Activity (LOCA)² is comprised of approximately 599 acres of agricultural land (e.g., field cropland, pastureland, and row cropland). Within the LOCA, existing vegetation will be cleared or mowed to an appropriate height prior to installation of Facility components. The use of machinery to install Facility components within the LOCA will also result in temporary soil impacts. Areas within the LOCA but outside of the Limits of Vegetation Management (LOVM)³ represent temporary disturbance only. In areas of temporary disturbance, farming practices will be paused during construction. Once construction is complete, agricultural areas that are temporarily disturbed will be restored in accordance with the Agricultural Plan provided in Appendix 15-A and the New York State Department of Agriculture and Markets (NYSDAM) *Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands* (Revision 10/18/2019), and any farming practices that were temporarily disturbed may resume. An Environmental Monitor will be on-site during construction and operation conducting daily inspections, ensuring compliance with relevant guidelines and construction best practices, and will facilitate direct contact with farm operators and the NYSDAM. See the Agricultural Plan (Appendix 15-A) for more details on agricultural monitoring.

Additionally, the Project has been sited and designed with input from participating landowners such that farming operations may continue within the remainder of parcels that fall outside of the Project fence lines or parcels excluded from development. Throughout the iterative layout design process, multiple Facility components were relocated several times to facilitate continued agricultural production. For example, access roads and collection lines were re-routed to retain more usable agricultural land, and gates were added into proposed fence lines to allow landowner access to continued farming operations. A summary of the layout changes implemented to avoid and minimize impacts to sensitive resources is provided in Appendix 11-E of the Application. Furthermore, as discussed below in Section (b)(3), several partial or complete exclusion zones were identified during consultations with participating landowners and incorporated into the initial Facility layout design. Agricultural operations within complete exclusion zones will be able to continue unaffected by construction of the Facility. There are no direct impacts to agricultural land use expected outside of the Facility Site boundaries.

Underground collection lines will be installed at a minimum 48-inch depth below ground in active agricultural fields, in accordance with NYSDAM guidelines, to minimize impacts to active agricultural land. Where overhead collection lines cross farmland, agricultural impacts will be minimized by using taller structures than typical industry-

² The LOCA encompasses the anticipated outer boundaries of where construction may occur within the Facility Site, including any necessary vegetation clearing and/or soil disturbance. This boundary includes defined work corridors along Facility components, fencing, and planting modules, and incorporates areas where construction vehicles and/or personnel may need extra room to construct the Facility (i.e., laydown yards).

³ The LOVM represents all areas which will have maintained vegetation for the life of the Facility and represents long-term conversion. This area generally includes all areas below and surrounding PV arrays within the fence line, areas adjacent to access roads outside the fence line where road edges will be mowed/maintained, areas adjacent to the collection substation and POI switchyard, visual screening plantings, and areas maintained for stormwater purposes.

wide standard design practices that provide longer spanning distances and poles will be located on field edges to the greatest extent practicable. Furthermore, the Applicant will coordinate with landowners to minimize disruption to active farming activities to the extent practicable. Once the Facility is operational, occasional maintenance and repair activities will be required; however, it is not anticipated that these activities will interfere with ongoing farming operations.

(8) Impacts to Agricultural Production Area

Active agricultural lands⁴ comprise approximately 1,029 acres (30%) of the 3,382-acre Facility Site and are primarily used for field crops and pasture. Of the total active agricultural lands within the Facility Site, 599 acres occur within the Facility's LOCA, and an estimated 591 acres occur within the LOVM. Within this area, soil disturbance due to grading and installation of permanent impervious surfaces (e.g., built Facility components) will impact up to 120 acres of active agricultural land (approximately 12% of active agricultural land within the Facility Site). Within the LOVM, the active agricultural lands within and surrounding the proposed PV arrays and other Facility components will be converted to an early successional community and will no longer be used in farming operations (i.e., "Long-Term Conversion" in Table 15-4). Significant soil disturbance and long-term conversion represents approximately 57% of active agricultural lands within the Facility Site where agricultural production and grazing will no longer be feasible due to the presence of solar panels throughout the lifetime of the Facility (anticipated to be up to 35-40 years; see Exhibit 23 for details on Decommissioning and Restoration of the Facility). Temporary soil disturbance is likely to occur within the LOCA but outside of the LOVM, resulting in approximately 8 acres of temporary disturbance to active agricultural lands. The majority of the impact to agricultural land, including 68% of significant soil disturbance and 78% of the long-term conversion areas, occurs in field cropland.

Active agricultural lands are prevalent throughout the Town of Ripley and Chautauqua County. Combined, lands that will experience temporary and permanent impacts comprise just 7% of the 9,048 total active agricultural lands within the Town of Ripley and less than 1% of the 66,643 total active agricultural lands within Chautauqua County.⁵ In addition, although approximately 1,069 acres of land enrolled in Chautauqua County Agricultural District 1 (CHAU001) occur within the Facility's LOCA, just 558 acres have also been identified as active agricultural land. This represents only 1% of the total land area within CHAU001, which includes lands throughout the Towns of Ripley, Westfield, and Portland, and the Villages of Brocton and Westfield. See Section (a)(1) above for additional discussion of agricultural districts.

⁴ Defined as land used in agricultural production for at least 3 of the previous 5 years.

⁵ Total active agricultural land area within the Town of Ripley and Chautauqua County is based on data available from the USDA National Agricultural Statistics Service (NASS) Cropland Data Layer.

Finally, approximately 199 acres of agricultural soils within the Facility Site are classified as Mineral Soil Groups (MSG) 1 through 4 under NYS Agriculture Land Classification. Specifically, MSGs 2 and 3 comprise 199 acres within the Facility Site and 126 acres occurs within the LOCA (MSGs 1 and 4 are not present). This represents just 2% of MSGs 1 through 4 within the Town of Ripley and less than 1% within Chautauqua County. See Table 15-4 below for more detail about temporary and permanent impacts to these MSGs.

As highlighted above, the Applicant will comply with the NYSDAM *Guidelines for Solar Energy Projects – Construction Mitigation or Agricultural Lands* requirements to further avoid, minimize, and mitigate impacts to agricultural lands to the maximum extent practicable. See the Applicant’s Agricultural Plan (Appendix 15-A) for further information.

Table 15-4. Impacts to Active Agricultural Areas

| Community/ Group | Acreage within Facility Site | Acreage within Limits of Construction Activity | Temporary Impact (acres) ¹ | Long-Term Conversion (acres) ² | Significant Disturbance ³ | Areas Not Impacted (acres) |
|--|------------------------------|--|---------------------------------------|---|--------------------------------------|----------------------------|
| Land Use | | | | | | |
| Active Field Cropland | 709 | 468 | 5 | 463 | 82 | 241 |
| Pastureland | 293 | 123 | 2 | 121 | 37 | 170 |
| Active Row Cropland | 27 | 8 | 1 | 7 | 1 | 19 |
| Total | 1,029 | 599 | 8 | 591 | 120 | 430 |
| Mineral Soil Groups within Active Agricultural Land | | | | | | |
| Group 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Group 2 | 8 | 7 | 0 | 7 | 1 | 1 |
| Group 3 | 191 | 119 | 2 | 117 | 13 | 72 |
| Group 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 199 | 126 | 2 | 125 | 14 | 73 |

¹ Impacts that will occur only during construction. Temporarily impacted areas will be restored following construction and will be allowed to revegetate naturally (i.e., will not be further disturbed during Facility operation).

² Areas that will be cleared during Facility construction and maintained as early successional communities within the Limits of Vegetation Management for the life of the Facility. Conversion of active row croplands to perennial early successional communities, such as those that will be maintained under PV arrays, is expected to result in a net benefit to wildlife and soil resources.

³ Areas with significant impact in agricultural areas, including grading and installation of impervious surface (e.g., concrete pads).

As discussed above in Section (a)(6), the Applicant consulted with participating landowners to understand how the siting of Facility components will affect existing agricultural use within the Facility Site. Of the responses received, several landowners indicated that their farming operations would not be adversely affected by the Facility and that they would plan to continue their farming operations. Some landowners noted that the Facility would result in a small reduction in farmland but farming operations would continue. One landowner who responded that

they would lose agricultural acreage with the development of the Facility indicated that they would seek other rental grounds to continue operations. Primary uses reported on these parcels include hayfields and pastureland. For many of these parcels, continued agricultural use is feasible due to the implementation of landowner identified exclusion zones (see Section (b)(3) below for additional detail). Approximately 22 acres of the LOCA fall within landowner-imposed exclusion zones in areas which primarily include temporary soil disturbance outside of Facility fence lines, around visual screening planting modules and, in cases of partial exclusion zones, the collection line and/or access road corridors. These areas are therefore included in the total anticipated temporary impacts to agricultural resources. These areas of temporary disturbance are primarily located at the periphery of active agricultural fields and are not anticipated to hinder farming operations during construction. As stated above, once construction is completed, all temporarily disturbed areas will be restored and stabilized in accordance with NYSDAM guidelines and an EM will be overseeing project activities and maintaining coordination with the landowner during and upon completion of construction.

(b) Maps

(1) Field-Verified Active Agriculture Land Use

Figure 15-3 depicts identified active agricultural land use within the 5-mile Study Area. Data for this figure was generated based on the 2018-2020 USDA CropScape Cropland Data Layers. This dataset is produced using imagery collected during the growing season from the Landsat 8 OLI/TIRS sensor, the Disaster Monitoring Constellation (DMC) DEIMOS-1 and UK2, the ISRO ResourceSat-2 LISS-3, and the ESA SENTINEL-2 satellites sensors. To supplement this data, recent parcel property classification data from the New York State Office of Real Property Services and parcels enrolled in the agriculture value use assessment program were utilized to help refine the identification of active agricultural parcels. Active agricultural land use within the Facility Site was further verified by responses to landowner surveys, as noted earlier, and during various on-site environmental studies performed on behalf of the Applicant.

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

Proposed impacts to plant communities within the Facility, including cropland and pastureland, are described in Exhibit 11 and depicted in Figure 11-1. All agricultural land that is not hosting Facility components will be able to remain in active agricultural use. Approximately 34% of the cropland, 58% of the pastureland, and 72% of the row cropland within the Facility Site, would be able to remain in production once the Facility is operational. All temporarily impacted active agricultural areas depicted in Figure 11-1 will be able to resume agricultural practices once the Facility is operational. Host landowners responding to the agricultural landowner survey have generally indicated that with the additional income from lease payments, and with additional land holdings, most will continue

agricultural operations on lands not developed by the Facility, or in some cases, seek other rental properties to continue farming operations.

(3) Landowner-Imposed Development Restrictions

As previously noted, the Applicant has consulted with landowners to identify areas within participating parcels that should be excluded from development to retain active agricultural production or for the protection of other resources (e.g., large forest stands). Figure 15-4 depicts agreed upon landowner development restrictions within the Facility Site that were established between landowners and the Applicant early in the design process. There are seven partial exclusion zones that allow only for the development of access roads or underground collection lines and that specifically restrict the installation of solar panels. There are also 14 complete exclusion zones in which the development of any Facility component is prohibited. These exclusion zones were treated as constraints during Facility design thereby supporting efforts by the Applicant to avoid and minimize potential significant adverse impacts to agricultural resources in both the Facility Site and the surrounding area. According to responses received from the landowner questionnaires, the primary agricultural uses within the identified exclusion zones include crops, livestock and livestock products, and timber. During Project activities, the land within these exclusion zones will remain available for the landowner to continue any existing farming operations. The Applicant is not aware of any landowner-imposed development restrictions outside of the Facility Site.

(4) Locations of Known or Suspected Drainage Systems

Figure 15-5 depicts the locations of known or suspected subsurface drainage systems within the 5-mile Study Area. As part of the agricultural landowner survey, the Applicant consulted with the landowners of parcels that comprise the Facility Site to obtain more specific information on the location of drainage systems within the Facility Site. Responding landowners indicated whether or not parcels included drain tiles, and if so, graphically indicated in their responses the approximate locations of these drain tiles within their fields. Four of the 28 returned surveys identified the presence of drainage tiles. The Applicant also sent requests for available information on surface or subsurface drainage to the Chautauqua County Department of Public Facilities (DPF), Chautauqua County Soil and Water Conservation District (SWCD), and the Chautauqua County GIS Department. The Chautauqua County DPF, SWCD, and GIS Department all responded that they did not have any data on surface or subsurface drainage. To supplement these responses, a National Center for Atmospheric Research dataset was utilized to capture potential drain tile areas within the 5-mile Study Area. These data use multiple USDA and USGS datasets to show a 30-meter resolution layer of suspected drain tile areas (Valayamkunnath et. al., 2020). Based on a review of this dataset, four additional parcels within the Facility Site were identified as suspected drain tile areas.

The Applicant has prepared a Drain Tile Remediation Plan to address unavoidable or inadvertent damages to surface or subsurface drainage within the Facility Site during construction (Appendix 15-B). This Plan is discussed in Section (d) below.

(5) USDA Soil Mapping

Soil types at the Facility Site were mapped using data from the United States Department of Agriculture (USDA) National Resource Conservation Service (NRCS) Web Soil Survey (WSS). See Figure 10-3 for a map delineating soil types within the Facility Site. A description of the soil types within the Facility Site and their characteristics are outlined in Table 10-1 of Exhibit 10.

(6) NYS Agricultural Land Classification for Impacted Agricultural Areas

The New York State Agricultural Land Classification System (NYSLCS) was developed as a production rating system for every individual soil-type in the state, and has been used extensively since the early 1980's. It includes the USDA NRCS land capability class per soil and incorporates additional scientific soil and crop data for precision rating of each soil-type by county.

The NYSLCS classifies each soil's inherent capability for agricultural production into one of 10 specifically ranked "mineral soil groups." 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 soil group 10.

The NYSLCS is administered by the NYSDAM in consultation with the State College of Agriculture and Life Sciences at Cornell University. 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.

As part of the 2021 Renewable Energy Standard Solicitation for Tier 1 Renewable Energy Certificates (RECs) the New York State Energy Research and Development Authority provides mapping of Mineral Soil Groups (MSG) 1-4 across all of the State. Mineral Soil Groups 1 through 4 are considered high quality agricultural land by the NYSLCS. Of the active agricultural lands to be impacted by construction and operation of the Facility, approximately 126 acres consist of soils within MSG 2 and 3 (27% of the total 469 acres of MSGs within the Facility Site). Exhibit 10 provides more information regarding potential impacts to soils in the Facility Site. See Figure 15-6 for a map depicting the NYS Agricultural Land Classification Mineral Soil Groups 1 through 10 within the Facility Site and 5-Mile Study Area.

(c) Agricultural Plan

The Applicant prepared an Agricultural Plan, consistent with the NYSDAM *Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands* (Revision 10/18/2019), which is included as Appendix 15-A to this Application. The Plan was prepared to avoid, minimize, and mitigate impacts to active agricultural lands to the maximum extent practicable during all phases of the Project, including Facility construction, restoration, post-construction monitoring and remediation, and decommissioning.

(d) Drain Tile Remediation Plan

The Applicant has prepared a Drainage Remediation Plan to address inadvertent damages to surface or sub-surface drainage features (Appendix 15-B). 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-B.

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

Surface and subsurface drainage features are present throughout the Facility Site. During on-site wetland and stream delineations (see Appendix 13-C), wetlands and streams were identified within the Facility Site, including five drainage ditches. The Facility has been sited to avoid these surface water features to the maximum extent practicable; however, permanent and temporary impacts are anticipated to occur to surface waters during construction and operation of the Facility, as discussed in Exhibits 13 (Water Resources and Aquatic Ecology) and 14 (Wetlands). The Applicant will adhere to the Project Stormwater Pollution Prevention Plan (SWPPP), developed in accordance with the GP-0-20-001 SPDES Permit to minimize the pollution and sedimentation of stormwater runoff and protect water quality during construction and operation of the Facility.

Based on the responses received from the agricultural landowner survey, approximately 3% (116 acres) of the Facility Site is known to have subsurface drainage infrastructure. For an additional 499 acres of the Facility Site, landowner responses indicated no known drainage infrastructure present.

Prior to construction, the location of all known drain tile lines will be flagged in the field to facilitate avoidance wherever practicable. While identification of existing drain tile systems can aid in minimizing impacts, impacts cannot feasibly be ruled out. Drain tile lines that are damaged during construction may be apparent immediately after impact or may display signs of damage slowly over time. Indications of damaged drain tiles may include unexpected surface water flow or ponding during dry conditions, formation of localized voids or sinkholes above the damaged drain tiles, and upwellings of water during high flow periods. Farmland and farming practices may be impacted by potential changes in surface water flow, increased soil saturation, and unstable ground conditions.

The Applicant will follow the procedures outlined in the Drainage Remediation Plan (Appendix 15-B) should any drainage systems become damaged or need repair during construction, operation, or upon decommissioning of the Facility.

The Applicant is not aware of any drain tile or surface water drainage systems that could be impacted by the Facility that extend outside the Facility Site into non-participating parcels. Through the siting and design of the Facility as well as the avoidance, minimization, and mitigation measures outlined above, drainage impacts that could impact farmland within or outside of the Facility as a result of construction or operation of the Facility are not anticipated.

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

Agricultural land utilized for the siting of the PV arrays will be largely removed from production for the duration of the Facility. As such, the Applicant proposes a separate restoration and repair plan for drain tile systems servicing properties owned by participating landowners that will remain in production during the operation of the Facility and those that will be taken out of production. See Appendix 15-B for additional details on the restoration and repair methods for drain tile systems.

In coordination with the landowner, damage to surface or subsurface drainage infrastructure, including culverts or pipes, that result from construction or operation of the Facility will be promptly repaired or replaced, as feasible.

(e) Agricultural Co-utilization Plan

An Agricultural Co-utilization Plan (e.g., sheep grazing within fenced PV array areas, etc.) is not proposed for the South Ripley Solar Project and therefore the requirements of §900-2.16(e) are not applicable.

REFERENCES

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