



FLAT CREEK SOLAR

Permit Application No. 23-00054

§ 1100-2.18 Exhibit 17

Consistency with Energy Planning Objectives

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Acronym List

Btu	British thermal units
CES	Clean Energy Standard
CLCPA	Climate Leadership and Community Protection Act
CO ₂	Carbon dioxide
EPA	Environmental Protection Agency
GHG	Greenhouse gas
GW	Gigawatt
kV	Kilovolt
LOD	Limits of disturbance
LSEs	Load-serving entities
MW	Megawatt
NCF	Net capacity factor
NO _x	Nitrogen oxide
NYCRR	New York Codes, Rules and Regulations
NYISO	New York Independent System Operator
NYPSC	New York Public Service Commission
NYSEPB	New York State Energy Planning Board
NYSERDA	New York State Energy Research and Development Authority
ORES	Office of Renewable Energy Siting and Electric Transmission
POI	Point of interconnection
PSC	Public Service Commission
PSL	Public Service Law
PV	Photovoltaic
REV	Reforming the Energy Vision
RGGI	Regional Greenhouse Gas Initiative
RPS	Renewable portfolio standard
SEP	State Energy Plan
SO _x	Sulphur oxides
SRIS	System Reliability Impact Study

Glossary Terms

Applicant	Flat Creek Solar NY LLC, a subsidiary of Cordelio Power LP, the entity seeking a siting permit for the Facility from the Office of Renewable Energy Siting and Electric Transmission (ORES) under Article VIII of the New York State Public Service Law.
Facility	Flat Creek Solar, a 300 MW solar generating facility located in the Towns of Root and Canajoharie, NY. The proposed Facility components to be constructed for the generation, collection, and distribution of energy for Flat Creek Solar include solar panel modules, electrical collection system, collection substation, point of interconnection (POI) switchyard, access roads, laydown/staging areas, and other ancillary facilities.
Facility Site	The participating parcels encompassing Facility components, which totals approximately 3,794 acres in the Towns of Canajoharie and Root, Montgomery County, New York (Figure 2-1).
Study Area	The Study Area for the Facility includes a radius of five miles around the Facility Site boundary, unless otherwise noted for a specific resource study or Exhibit. The 5-mile Study Area encompasses approximately 108,667 acres, inclusive of the approximately 3,794-acre Facility Site.
Limit of Disturbance (LOD)	The area to which temporary construction impacts will occur, totaling approximately 1,637 acres.

Exhibit 17: Consistency with Energy Planning Objectives

This Exhibit provides information required in accordance with the requirements of §1100-2.18 of the Article VIII Regulations. This Exhibit discusses the Facility and its consistency with New York State energy policies, including Climate Leadership and Community Protection Act (CLCPA) targets and long-range energy planning objectives and strategies contained in the most recent State Energy Plan (SEP).

17(a) Consistency with State Energy Planning

New York State has a long history of supporting clean renewable energy. For over twenty years, New York has been a nationwide leader in climate action. Starting in 2002, the New York SEP set targets for increasing renewable energy production and reducing greenhouse gas (GHG) emissions and is updated every 10 years.

The most recent SEP adopted in 2015 mandated for 50% of New York's electricity to be generated from renewable sources by 2030 and for a 40% reduction in statewide GHG emissions by 2030. The 2015 SEP placed New York at the forefront of renewable energy policy.

In 2004, the Public Service Commission (PSC) instituted the statewide renewable portfolio standard (RPS) to further encourage renewable energy penetration in the electricity market. The RPS set a target of 25% of retail energy consumption from renewable sources by 2014. In 2008, New York became a charter member of a multi-state cooperative effort known as the Regional Greenhouse Gas Initiative (RGGI), which addresses carbon dioxide emissions in the electricity sector. RGGI was the first market-based regulatory program to limit GHG emissions in the United States and has been considered a market success.

To turn the SEP into action, the governor and the PSC created a comprehensive energy strategy for New York called Reforming the Energy Vision (REV). In August 2016, the PSC adopted the Clean Energy Standard (CES) to ensure that the SEP and REV goal of 50% renewable energy consumption in New York by 2030 is achieved. The CES is designed to encourage development of large-scale economically viable renewable projects that can compete with all other generation sources in the electric market. In 2019 New York enacted the CLCPA which sets statewide greenhouse gas emission limits to 60% of 1990 emissions by 2030 and 15% of 1990 emissions by 2050. The CLCPA also increased the State's electric sector targets, including a requirement that 70% of the State's electricity come from renewable energy by 2030, while 100% of the State's

electricity supply must be emissions free by 2040. In 2020, The Accelerated Renewable Energy Growth and Community Benefit Act (Act) was adopted, which added Section 94-c to the New York State Executive Law, titled Major Renewable Energy Development. Section 94-c and its implementing regulations created an expedited process for reviewing renewable energy projects of 25 megawatts (MW) or greater. Section 94-c is implemented by the Office of Renewable Energy Siting (ORES). This process replaced previous provisions under Article 10 of the New York State Public Service Law (PSL) and provided more appropriately outlined and standardized permitting and compliance requirements for renewable energy projects in New York. Effective April 20, 2024, the Renewable Action through Project Interconnection and Deployment (RAPID) Act repealed Executive Law § 94-c, repealed the current Public Service Law article VIII, and enacted a new Public Service Law article VIII entitled “Siting of Renewable Energy and Electric Transmission.” The RAPID Act also retitled the Office as the Office of Renewable Energy Siting and Electric Transmission, transferred the Office from the Department of State to the Department of Public Service, continued all existing functions, powers, duties, and obligations of the Office under Executive Law former § 94-c, and added new functions, powers, duties, and obligations related to major electric transmission siting.

With respect to regulations, the RAPID Act transferred Part 1100 to 16 New York Codes, Rules and Regulations (NYCRR) chapter XI, and continued Part 1100 in full force and effect subject to conforming changes, such as the substitution of numbering, names, titles, citations, and other non-substantive changes to be filed with the Secretary of State. The conforming changes were filed with the Secretary of State as a new Part 1100 of Title 16 of the NYCRR and became effective July 17, 2024.

As outlined further below, the construction and operation of Flat Creek Solar (the Facility) is consistent with New York State energy policies, including CLCPA targets, the long-range energy planning objectives and strategies contained in the 2015 SEP, as amended, and related policies and plans.

State Energy Plan (SEP)

The New York State Energy Planning Board (NYSEPB) adopted the most recent update, pursuant to New York State Energy Law § 6-104 in June 2015, provides a wide range of goals for New York’s energy system.

The supports the development of renewable fuel technology in support of an overall reduction GHG emissions. While there are several components to the SEP and methods of reducing New York State emissions, projects such as the Flat Creek Solar Project, provide clean energy at a size and manner which directly supports the SEP objectives.

The Facility is consistent with the SEP because it proposes to generate electricity through a renewable fuel technology, solar energy, which generates electricity without emitting carbon dioxide or other GHG emissions. The SEP calls for reducing statewide GHG emissions 40% from 1990 levels, generating 50% of the State's electricity from renewable resources by 2030, and increasing statewide energy efficiency by 600 trillion British thermal units (Btu) from 2012 levels (SEP, 2015). According to the SEP, large-scale renewables have several immediate benefits for the State including: "economic development and jobs for communities across the State, greater stability in customer bills, [and] cleaner air..." (SEP, 2015). The SEP was amended in 2020 to include the renewable energy targets of the CLCPA, which are discussed below (SEP Amendment).

Clean Energy Standard (CES)

In August 2016, the New York Public Service Commission (NYPSC) adopted the CES to ensure that New York will achieve the SEP's goal of 50% of New York's electricity to be generated from renewable energy by 2030. "The chief focus of the CES initiative is on building new renewable resource power generation facilities" (NYPSC, 2016). The CES also sought to reduce the "total emissions of air pollutants resulting from fossil fuel combustion" (NYPSC, 2016).

The CES employs two related mechanisms to reach the SEP's renewables goal. First, it requires load-serving entities (LSEs) to obtain an increasing percentage of their electricity needs from renewables. LSEs demonstrate compliance by purchasing renewable energy credits (RECs) from renewable resources (NYPSC, 2016). Second, to ensure that an increasing number of RECs are available to LSEs, the CES authorizes the New York State Energy Research and Development Authority (NYSERDA) to procure RECs from renewables (NYPSC, 2016). Renewables sited within New York are eligible to sell RECs regardless of their location within the State (NYPSC, 2016).

The NYSPSC's highest projection for the amount of utility-scale solar that would need to be installed to help reach the 50% renewables mandate was approximately 6,900 MW (NYPSC, 2016, Appendix G). The NYSPSC noted that even if 100% of those projects were sited on New

York agricultural lands, only about 0.16% of such lands would be converted to utility-scale solar (NYPSC, 2016, Appendix G). The NYPSC’s 2016 analysis was recently updated to reflect the CLCPA’s increased renewables targets (NYPSC, 2020). While the 2016 analysis assumed that solar facilities require 2 acres per MW, the 2020 analysis increased this assumption to 5 acres per MW (NYPSC, 2020). Nevertheless, the 2020 analysis found that increasing the State’s renewables mandate from 50% to 70% by 2030 would only see approximately 0.2%–0.5% more of New York’s agricultural lands occupied by utility-scale solar facilities (NYPSC, 2020). In other words, at most, 0.66% of New York’s agricultural lands would host utility-scale solar facilities to achieve the 70% by 2030 mandate. Further, the 2020 analysis concluded that, “[g]iven the minor conversion of land compared to available crop and pastureland, project-specific agency guidelines, and restoration following decommissioning, significant adverse impacts on land use and land cover would not be expected from incremental utility-scale solar development” (NYPSC, 2020).

New York State Climate Leadership and Community Protection Act (CLCPA)

The CLCPA accelerates the State’s renewable energy penetration target to 70% by 2030 with 6 gigawatts (GW) of solar generation by 2025. The CLCPA ultimately requires 100% carbon-free electricity by 2040. To achieve these targets, the CLCPA calls for the following:

- Increasing New York’s offshore wind target to 9,000 MW by 2035, up from 2,400 MW by 2030;
- Doubling distributed solar deployment to 6,000 MW by 2025, up from 3,000 MW by 2023;
- Maximizing the contributions and potential of New York’s existing renewable resources; and
- Deploying 3,000 MW of energy storage by 2030 (in accordance with the NYPSC’s goal).

Regional Greenhouse Gas Initiative (RGGI)

New York State is a member of the RGGI, which is a regional marketplace that limits carbon dioxide (CO₂) emissions through a cap-and-trade program. The direct benefits of CO₂ emissions reductions are realized through the broader regional marketplace that New York participates in through RGGI. Participating states “implemented a new cap reduction trajectory of 30% over the period 2020 to 2030” (RGGI, 2021). The sale of the CO₂ allowances allows New York State to

invest in programs that encourage innovations in clean energy technology and the creation of green jobs.

10-Point Renewable Energy Action Plan

On October 12, 2023, Governor Hochul announced a 10-Point Action Plan to expand a thriving large-scale renewable industry in New York. The 10-Point Action Plan affirms New York's commitment to expanding clean energy and achieving the goals of the CLCPA.

Consistency with State Policies

New York's energy policies are geared toward increasing the amount of renewable generation and decarbonizing the energy sector. The State Legislature made this clear with the CLCPA. Solar energy is one of the cleanest forms of renewable energy. In support of decarbonization, solar facilities such as Flat Creek Solar will generate electricity without emissions and directly contribute to New York States goals and objectives. The Facility is consistent with the CES's goal of reducing total emissions of air pollutants that result from fossil fuel generation, and RGGI's goal of reducing CO₂ emissions. In addition to offsetting CO₂ producing methods of energy generation, the Facility directly increases energy production from a renewable source (solar), which is consistent with the CLCPA's 6 GW solar target for renewable generation.

The Applicant is a private entity and is making a significant private investment to develop the Facility. The Facility will employ efficient, state-of-the-art solar technology. The Facility is also consistent with the SEP's Guiding Principles. It will help transform New York's energy market by moving it further from fossil fuels to a more diverse, renewables-based market.

Accelerated Renewable Energy Growth and Community Benefit Act

In addition to the New York State energy policies and plans identified above, the adoption of Section 94-c under the Accelerated Renewable Energy Growth and Community Benefit Act (enacted April 3, 2020) replaced the previous permitting regime (Article 10 of the PSL) for renewable energy generation facilities. This new legislation replaces the Article 10 process for wind and solar generation projects and allows a more streamlined process with the bulk of studies and comprehensive analyses occurring prior to submittal of the Application. Section 94-c framework was designed to streamline the siting and construction of renewable energy facilities while ensuring environmentally friendly and cost-effective measures are utilized. The contents of

this Section 94-c Application conform to the requirements under Section 94-c and, in effect, operate to further the goals and objectives of renewable energy generation in New York State.

17(b) Impact on Reliability

A System Reliability Impact Study (SRIS) has been prepared and the results indicate that the Facility will not adversely impact reliability of the New York State Transmission System. Numerous analyses, discussed in Exhibit 21 (Electric System Effects and Interconnection) of this Application, were performed for the SRIS. The SRIS is included in the Application as Appendix 21-1; however, the SRIS is being submitted under trade secret and confidential commercial information protection as it contains critical infrastructure information.

17(c) Impact on Fuel Diversity

Fuel diversity is an important aspect to consider when combating global climate change and aiming to reduce GHG emissions. Development of the Facility will provide additional generating capacity from solar, helping to diversify New York's energy economy and ease New York's overdependence on natural gas and other polluting fossil fuels. Fuel diversity leads to increased resilience and overall grid reliability (New York Independent System Operator [NYISO], 2021).

The Facility will increase fuel diversity within New York State by increasing the amount of electricity produced by solar generation facilities. This, in turn, will help to diversify New York's energy economy and ease New York's overdependence on natural gas and other polluting fossil fuels. The New York electric utility system relies on supply from numerous fuel sources, including natural gas, hydroelectric, nuclear, wind, oil, and solar, as well as interconnections with its neighbors and demand-response resources. Fuel diversity leads to increased resilience and overall grid reliability.

17(d) Impact on Regional Capacity Requirements

An SRIS was conducted for the maximum capacity of 300 MW of renewable generation energy that will be added to the region once the Facility is operational. The results from the SRIS indicate that the Facility has no significant adverse impact on the reliability of the New York State Transmission System, and therefore, the Facility will not adversely affect the regional capacity requirements. The SRIS is included as Appendix 21-1 of this Application, however, it will be filed separately under confidential cover as NYISO requires SRIS to remain confidential due to Critical Energy Infrastructure Information Regulations. The results of the SRIS and how the Facility will

impact the regional energy and capacity demands are further explained in Exhibit 21 of this Application.

17(e) Impact on Electric Transmission Constraints

The Facility will not result in new electric transmission constraints. In the SRIS, the NYISO did not identify any additional or new electric transmission system constraints that would be created by the Facility. Exhibit 21 discusses the Facility's effect on transfer capacity across affected interfaces.

17(f) Analysis of Reasonable and Available Alternative Locations

Availability of Alternative Sites

As described throughout the Application, many factors were considered in selecting the Facility Site for development of the Flat Creek Solar Project. The selection of utility-scale solar locations is driven by several factors and constraints, including technical (both engineering and environmental), economic, and operational factors. Figure 24-1 of Exhibit 24 (Local Laws and Ordinances) includes a constraints map which depicts the factors which limited buildable areas within each parcel at the Facility Site. The final 3,794-acre Facility Site (land under lease and easement agreement) was selected based primarily on the following criteria:

- **Availability of the solar resource** – the Facility Site was identified as having a strong solar resource through an initial screening process using statewide solar resource data. In addition, a solar resource assessment taking into account historical weather data and average monthly irradiation for the project site was conducted to more accurately predict the potential for energy production and confirm the initial screening results.
- **Available land from willing landowners** – the Applicant was able to secure the rights to the Facility Site from willing landowners and the Facility Site has sufficient acreage of suitable land for development of a 300 MW solar facility. Exhibit 2 (Overview and Public Involvement) details the processes the Applicant went through which resulted in sufficient land capacity for development of a 300 MW solar project.
- **Proximity to and ease of interconnecting to the existing transmission grid** – the Facility's Point of Interconnection (POI) to New York State's electric grid will consist of the collection substation and POI switchyard located in the central portion of the Facility Site,

immediately adjacent to the existing New York Power Authority (NYPA) 345 kilovolt (kV) Transmission Line #352. This transmission line was recently upgraded in (2023 and 2024 as part of the Central East Energy Connect transmission project) in order to decrease congestion and increase deliverability to enable integration of more renewable energy into the state power grid. This transmission line was identified by the Applicant as a strong, reliable opportunity for renewable energy interconnection.

- **Sufficient available capacity on the grid** – the Facility’s SRIS indicates that the existing (recently upgraded) NYPA 345 kV Transmission Line #352 has the available capacity required to support the Facility.
- **Relative ease of access to the Facility Site** – the Facility Site is accessible from Miller Drive, Cunningham Road, Carlisle Road (County Road 93), Canyon Road, Conway Road, Hilltop Road, Flat Creek Road (County Road 98), Rappa Road, Mapletown Road, and State Highway 162. In addition, the parcels that make up the Facility Site are in relative proximity to one another, allowing the sharing of Facility infrastructure, and consolidating the Facility footprint. For additional information on the roads being utilized for the Facility, please refer to Exhibit 16 (*Effects on Transportation*).
- **Local Laws** -Laws that encourage reasonable solar development are essential for the Applicant when selecting sites, as such laws provide a more straightforward process and reduce uncertainty associated with obtaining waivers and necessary approvals. However, in this case, after the Facility Site was identified and the Applicant began developing the Facility, the local laws were amended to include increased setbacks and constraints that were not contemplated during the initial design of the Facility. See Exhibit 24 (*Local Laws and Ordinances*) for further discussion on local laws.

The Facility layout has been refined extensively based on input from stakeholders and the results of key resource studies, environmental assessments, and engineering inputs and constraints. The Facility Site available acreage under lease and easement agreement totals 3,794 acres and through the design process the Applicant was able to efficiently site the Facility and limit the limits of disturbance (LOD) to 1,637 acres, essentially limiting the overall impact of the Facility footprint. These refinements were considered advantageous as the design process minimized impacts and allowed the opportunity to:

- Maximize photovoltaic (PV) array placement in contiguous areas and on large parcels in proximity to the POI switchyard to consolidate impacts and minimize the amount of direct

disturbance from the Facility. In addition, two parcels totaling approximately 120 acres of panels with willing landowners to the east of the current Facility Site were excised from the Facility in order to consolidate the Facility components and minimize Facility sprawl to the extent possible.

- Site the collection substation and POI switchyard adjacent to the existing NYPA 345 kV Transmission Line #352, minimizing additional above ground power line construction and reducing overall impacts.
- Minimize points of access and their proximity to non-participating parcels, which reduces traffic impacts in the surrounding area. Community input from the February Community Meeting helped to identify additional ways to minimize impact and as a result of meaningful discussions, the current design reflects several access road entrances which have been adjusted to provide more privacy to nearby driveways, the elimination of two access roads off of Lincoln Road in order to avoid use of a seasonal road identified as having recreational significance, one access road redesigned as recommended by a non-participating landowner to alleviate stormwater concerns, and one access road redesigned in order to allow for continued shared use of an existing drive by a non-participating farmer. For additional information on the roads being utilized for the Facility, please refer to Exhibit 16 (*Effects on Transportation*).
- Avoid and minimize disturbances within environmentally sensitive areas including wetlands, streams, and state listed rare and threatened species habitats, as discussed in Exhibits 12, 13, and 14, respectively. Throughout development of the layout, the Applicant made the several adjustments to avoid and minimize impacts to environmentally sensitive resources, including:
 - Limiting stream and wetland crossings;
 - Crossing Flat Creek at an existing agricultural crossing to limit impacts;
 - Using horizontal directional drilling (HDD) under sensitive aquatic resources, including all perennial waterbodies;
 - Co-locating collection lines to limit disturbed areas;
 - Removing acreage from development to avoid identified environmental constraints;
 - Limiting clearing in stream and wetland buffers; and

- Clearing vegetation without grubbing stumps in select areas to avoid significant ground disturbance.
- Allow maximum efficacy of planned landscape screening (Exhibit 5 *Design Drawings* and Exhibit 8 *Visual Impacts*). To address concerns over visibility of the Facility, the Applicant is implementing multiple planting templates.
- Meet state regulatory requirements for siting of large-scale renewable energy facilities which have been determined to be protective of human health and the environment for these types of projects in New York State, including adherence to recommended setbacks and standards.
- Met local regulatory requirements to the maximum extent practicable as described in Exhibit 24 (*Local Laws and Ordinances*).
- Considered stakeholder input more fully:
 - Landowners participating in the Facility were consulted prior to design order to ensure the proposed solar facilities would be compatible with their past, current and future plans for their property. Landowners either provided a specific location on their property where they wanted the solar facilities to be located or they were open to hosting solar facilities on any portion of their property. If the entire property was considered, then Landowners were additionally met with for a design review process where proposed panels, access roads, collection corridors and landscaping locations were reviewed. Participating Landowner input was taken into consideration and incorporated into the design.
 - The Applicant met with the local fire departments and emergency responders who provided feedback at the Wednesday, April 17th meeting that were incorporated into the design. Their recommendations to minimize traffic impacts during construction were taken into consideration and transportation haul routes were designed to avoid the Village of Canajoharie. The departments also requested minimizing the use of seasonal road access within the Facility Site, which was accommodated. Security fencing within the Facility Site was designed in order to maintain access to water resources such as existing farm ponds. Specific details regarding access roads, security, and other considerations discussed with the fire departments and represented herein are included in Exhibit 6 (*Public Health and Safety*).

- The school district has provided input on school bus routing and schedules which has been taken into account in the transportation plan to minimize and avoid impacts and disruption. The Applicant will continue dialogue with the School District
 - The Town of Canajoharie requested, in response to the visual outreach consultation performed as part of Exhibit 9, that facilities along Cunningham Road, located across from the school athletic fields be removed from the Facility based on visual concerns. In order to further evaluate the Facility's visual impact at this location, the Applicant assessed additional viewpoints from both the closest school building and the athletic fields. Visual simulations from these viewpoints show that the visual impact will not be significant. Additionally, the Applicant has utilized an increased setback of 250 feet from Cunningham Road in the vicinity of the school and athletic fields to further mitigate visual concerns. The Applicant will install landscaping along this roadside to address the Town of Canajoharie's visual concerns in this area.
 - Input received from the neighboring agricultural community was incorporated into the design to the extent practicable. Requests included an adjustment to the Facility fencing to maintain access to adjacent agricultural fields, relocation of Facility access roads to maintain current and historical access patterns and expected access and driveway use, and protection of existing drainage patterns.
- Minimize the potential for noise impacts by maximizing the distance of noise-generating Facility components from nearby residents (Exhibit 7 Noise Impacts).

The Applicant is a private applicant that lacks the power of eminent domain. Therefore, the locations available and that may be reasonably considered for the Facility are limited to those which the Applicant or its affiliates have control. There are no reasonable and available alternative locations for the Facility.

17(g) Public Health and Welfare, Climate Change

As described herein, the Facility will promote public health and welfare, including minimizing public health and environmental impacts related to climate change by directly offsetting CO₂ emissions and providing a renewable source of energy. As discussed above, the Facility will generate electricity without emissions. Solar photovoltaic technology produces no greenhouse

gases nor local pollutants such as nitrogen oxides (NOx), sulphur oxides (SOx), and particulate matter. Using this sustainable technology will help reduce reliance on fossil fuel generation which produces emissions that can negatively affect the health of nearby residents and contribute to climate change. Lowering emissions also improves air quality which is beneficial to public health. Additionally, lowering GHG emissions will decrease heat quantities trapped in the atmosphere which can cause warmer climates and alter large climate systems such as weather and wind patterns (Environmental Protection Agency [EPA], 2020).

To calculate the CO₂ emissions that will be offset by the proposed Facility per year, the Applicant utilized the United States Department of Environmental Protection (EPA) Greenhouse Gas Equivalencies Calculator, which uses national average emission factors. Through this tool, it is estimated that up to 206,520 tons of CO₂ emissions will be offset by the proposed Facility per year, which is enough power to meet the annual electricity needs of up to 36,975 homes within the United States (EPA, 2024).

The Applicant ran the following calculation: 300 MW (the Facility annual MW generation maximum) x 365 days (one-year time-period) x 24 hours (one-day time-period) x 17.1% net capacity factor (NCF) = 449,388 MW/yr nameplate. The Applicant then converted the 449,388 MW/yr to KW/yr through the following conversion factor (1 MW = 1000 KW) to determine that the Facility has a 449,388,000 KW/yr nameplate. The Applicant then inputted the 449,388,000 KW/yr data into the EPA Greenhouse Gas Equivalencies Calculator as “kilowatt-hours avoided” to get the total tons of CO₂ emissions that will be offset by the Facility per year and the average annual number of houses that the Facility will power.

Additionally, the Applicant utilized the EPA AVoided Emissions and geneRation Tool (AVERT), which uses the regional average emissions factors to calculate CO₂ emissions that will be offset by the proposed Facility per year. By selecting the NYISO region and noting the size of the Facility as 300 MW (Facility annual MW generation maximum), the AVERT tool indicated that the Facility will reduce CO₂ emissions annually by up to 244,270 tons and generate enough energy to power up to 40,442 average homes annually in the United States.

As discussed further in Exhibit 6, the Facility will reduce carbon and other emissions associated with energy generation, thereby minimizing public health and environmental impacts related to climate change. In addition, the placement of Facility components has been researched, reviewed, and analyzed throughout the development and engineering process to avoid and/or

minimize negative impacts to the maximum extent practicable and to incorporate extensive siting considerations including but not limited to landowner requests, solar resource, constructability, and avoidance and minimization of impacts to wetlands, streams, state-listed species, and prime farmland.

References

New York Independent System Operator (NYISO). 2021. Power Trends 2021: New York's Clean Energy Grid of the Future. <https://www.nyiso.com/documents/20142/2223020/2021-PowerTrends-%20Report.pdf/471a65f8-4f3a-59f9-4f8c-3d9f2754d7de>.

New York Public Service Commission (NYPSC). 2016. Case 15-E-0302, Order Adopting a Clean Energy Standard. [http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId= {44C5D5B8-14C3-4F32-8399-F5487D6D8FE8}](http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={44C5D5B8-14C3-4F32-8399-F5487D6D8FE8}).

New York State Energy Planning Board (NYSEPB). 2015. 2015 New York State Energy Plan. June 25, 2015. <https://energyplan.ny.gov/>.

The Regional Greenhouse Gas Initiative. (RGGI). 2021. Welcome. <https://www.rggi.org>.

United States Environmental Protection Agency (EPA). 2020. Overview of Greenhouse Gases. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>.

United States EPA. 2023. Greenhouse Gas Equivalencies Calculator. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.