



BLISS WIND REPOWERING PROJECT

MATTER NO. 23-03030

16 NYCRR §1100-2.18 Exhibit 17

Consistency with Energy Planning Objectives

TABLE OF CONTENTS

17.0	EXHIBIT 17 – CONSISTENCY WITH ENERGY PLANNING OBJECTIVES	17-1
	SUMMARY OF EXHIBIT	17-1
17.1	CONSISTENCY WITH THE STATE ENERGY PLAN	17-1
	17.1.1 State Energy Plan and Energy Planning Objectives	17-1
	17.1.2 Consistency with State Energy Policies (16 NYCRR § 1100-2.18 (a)).....	17-8
17.2	DESCRIPTION OF IMPACTS.....	17-15
	17.2.1 Reliability (16 NYCRR § 1100-2.18 (b)).....	17-15
	17.2.2 Fuel Diversity (16 NYCRR § 1100-2.18 (c)).....	17-15
	17.2.3 Regional Capacity (16 NYCRR § 1100-2.18 (d)).....	17-15
	17.2.4 Electric Transmission Constraints (16 NYCRR § 1100-2.18 (e)).....	17-16
17.3	COMPARATIVE ADVANTAGES AND DISADVANTAGES OF REASONABLE AND AVAILABLE ALTERNATIVE LOCATIONS (16 NYCRR § 1100-2.18 (f))	17-17
17.4	PUBLIC HEALTH AND WELFARE (16 NYCRR § 1100-2.18 (g)).....	17-19
17.5	UNIFORM STANDARDS AND CONDITIONS	17-21
17.6	REFERENCES.....	17-21

ACRONYM LIST

AREGCB Act	Accelerated Renewable Energy Growth and Community Benefit Act
AVERT	Avoided Emissions and Generation Tool
CES	Clean Energy Standard
CJWG	Climate Justice Working Group
CLCPA	Climate Leadership and Community Protection Act
CO2	Carbon Dioxide
CP	Commissioner Policy
DACs	Disadvantaged Communities
EPA	United States Environmental Protection Agency
GHG	Greenhouse Gas
GW	Gigawatts
HCA	Host Community Agreements
kV	Kilovolt
LSE	Load serving entity
LSR	Large-scale renewables
MET	meteorological evaluation tower
MW	Megawatt
MWh	Megawatt hours
NERC	North American Electric Reliability Corporation
NYCA	New York State Control Area
NYISO	New York Independent System Operator
NYSDEC	New York State Department of Environmental Conservation
NYSEPB	New York State Energy Planning Board
NYSERDA	New York State Energy Research and Development Authority
NYSPSC	New York State Public Service Commission
ORES	Office of Renewable Energy Siting and Electric Transmission
PILOTs	Payment in Lieu of Taxes Agreements

POI	point of interconnection
RAPID	Renewable Action through Project Interconnection and Deployment
RECs	Renewable Energy Credits
REV	Reforming the Energy Vision
RGGI	Regional Greenhouse Gas Initiative
SEP	State Energy Plan
Siting Board	New York State Board on Electric Generation Siting and the Environment
SRIS	System Reliability Impact Study

GLOSSARY TERMS

Key terms used frequently in this Application are defined below:

Applicant: Means Valcour Bliss NewCo, LLC.

Existing Facility: Refers to the existing 100.5-megawatt (MW) wind energy facility and its components located in the Town of Eagle, Wyoming County, New York, and commonly known as the Bliss Windpark.

Facility Site: Refers to those privately owned parcels under option to lease, purchase, create an easement, or other real property interests with the Applicant on which all Repowered Facility components will be sited, including roads, collector lines, and interconnection with the electrical grid.

Limits of Disturbance: Refers to the portion of the Facility Site that will necessarily be utilized to facilitate construction and operation of the Repowered Facility, including temporary workspaces.

Repowered Facility: Refers to the Bliss Wind Repowering Project, an approximately 110.5 MW wind energy generation facility located in the Town of Eagle, Wyoming County, New York, that will consist of new wind turbines, access roads, buried electric collection lines, collection substation facility improvements, temporary laydown and parking, permanent meteorological towers, and an aircraft detection lighting system tower. The Repowered Facility will reuse other existing aboveground components, including overhead collection lines, access roads, an operations and maintenance building, a 34.5-kilovolt (kV) to 115 kV collection substation; and a point of interconnection switchyard station owned by the Rochester Gas and Electric Corporation.

Study Area: Refers to the area evaluated for specific resource identification and/or resource impact assessment. The size of this area is appropriate for the target resource and takes into account the project setting, the significance of the resource or impact being identified or evaluated, and the specific survey distances included in 16 New York Codes, Rules, and Regulations Part 1100. Unless indicated otherwise in a specific exhibit, the Study Area represents the area within a 5-mile radius of the Facility Site.

16 NYCRR §1100-2.18 Exhibit 17 Consistency with Energy Planning Objectives

Exhibit 17 Information	Found in Section
Exhibit 17 shall contain:	
a) A statement demonstrating the degree of consistency of the construction and operation of the facility with New York State energy policies, including CLCPA targets and long range energy planning objectives and strategies contained in the most recent State Energy Plan at the time of filing the application, including consideration of the information required by subdivisions (b) through (g) of this section;	17.1.2
b) A description of the impact the facility would have on reliability in the state;	17.2.1
c) A description of the impact the facility would have on fuel diversity in the state;	17.2.2
d) A description of the impact the facility would have on regional requirements for capacity;	17.2.3
e) A description of the impact the facility would have on electric transmission constraints;	17.2.4
f) An analysis of the comparative advantages and disadvantages of reasonable and available alternative locations or properties identified for construction of the facility; and	17.3
g) A statement of the reasons why the facility will promote public health and welfare, including minimizing the public health and environmental impacts related to climate change.	17.4

17.0 EXHIBIT 17 – CONSISTENCY WITH ENERGY PLANNING OBJECTIVES

SUMMARY OF EXHIBIT

This Exhibit addresses the requirements specified in the Office of Renewable Energy Siting and Electric Transmission’s (ORES) regulations pursuant to 16 NYCRR Section 1100-2.18. Accordingly, this Exhibit demonstrates consistency with New York State energy policies, including Climate Leadership and Community Protection Act (CLCPA) targets and long-range energy planning objectives, as well as strategies contained in the 2015 State Energy Plan (SEP), as amended on April 8, 2020. This Exhibit summarizes the status of New York State energy policies that apply to the Bliss Wind Repowering Project (Repowered Facility) and describes or includes by reference the assessment of potential impacts to reliability, fuel diversity, regional requirements for capacity, electric transmission restraints, and public health and welfare in accordance with current New York State energy policies. Based on the analysis of documentation and requirements referenced in this Exhibit, the Repowered Facility will be consistent with New York’s energy planning objectives, including reliability, fuel diversity, regional requirements for transmission capacity and transmission constraints.

Valcour Bliss NewCo, LLC’s (the Applicant) development process considered the advantages and disadvantages of available alternative locations for the Repowered Facility, based on suitable available land for the proposed capacity and proximity to transmission, which are essential to operate in a manner that is viable both technically and economically. As demonstrated in this Application, renewable energy facilities such as the Repowered Facility offer significant environmental, public health, and community benefits and will aid the state in transitioning from carbon-emitting electric generation, which has negative impacts on human health and the environment, toward a carbon-free energy future. The Repowered Facility will contribute toward New York State’s CLCPA targets by offsetting the equivalent of approximately 214,600 metric tons of carbon dioxide¹ associated greenhouse gas emissions generated by traditional energy sources annually in New York State while producing enough zero-emissions energy to power approximately 19,800 homes.²

17.1 CONSISTENCY WITH THE STATE ENERGY PLAN

17.1.1 State Energy Plan and Energy Planning Objectives

According to a July 2024 report by the New York Independent System Operator (NYISO), New York State will need to bring significant additional renewable generation into service before 2030 to meet the targets set by the CLCPA (NYISO, 2024a). Further, by 2040, the state will need to bring online an additional 111 to 124 GW of total generating capacity online to achieve the CLCPA

¹ Based on EPA’s Greenhouse Gas Equivalencies Calculator for Kilowatt-hours avoided of 319,433,400 (see calculation in Section 17.4. The calculator uses a national average avoided emissions rate.

² Based on EPA’s Avoided Emissions and Generation Tool (AVERT) which quantifies changes in electricity generation and emissions that result from energy policies and programs. AVERT was set to New York State for an on-shore wind capacity of 110.5 MW.

emissions-free mandate. Given that New York has approximately 37 GW of total generating capacity, of which 12.9 GW have been developed since deregulation of the state’s electric markets in 1999, these additions represent an enormous and rapid investment in new renewable generation capacity—nearly doubling over the next eight years what the state had achieved in new generation across the past 22 years—an effort which will require substantial expansion of large-scale renewable energy generation projects. Projects like the Repowered Facility will play an important role in ensuring New York is on track to meet these targets.

ORES’s Article VIII regulations require an analysis of the Repowered Facility’s consistency with New York State energy policies, including CLCPA targets and long-range energy planning objectives and strategies contained in the most recent SEP at the time of Application filing. As demonstrated in the following subsections, the Repowered Facility, proposed to be constructed by Valcour Bliss NewCo, LLC (the Applicant), will be a beneficial addition to the state’s electric generation capacity and advance important objectives of the CLCPA, the 2015 New York SEP,³ the Reforming the Energy Vision (REV) initiative, the Clean Energy Standard (CES), and other important state energy laws and policies.

New York has adopted strongly proactive policies to combat climate change and modernize the electric grid, and to improve the efficiency, affordability, resiliency, and sustainability of the system. These policies are most notably reflected in the 2015 SEP, issued June 25, 2015, and amended April 8, 2020; the Public Service Commission’s REV initiative, which includes the Clean Energy Standard proceeding; the adoption of the CLCPA in June 2019; and, most recently, the adoption of Article VIII itself in April 2020. New York State is also a participant in the Regional Greenhouse Gas Initiative (RGGI), whose greenhouse gas (GHG) reduction goals are further advanced by projects such as the Repowered Facility.

State Energy Plan

New York State Energy Law §6-104 requires the New York State Energy Planning Board (NYSEPB) to adopt an SEP with a minimum 10-year outlook. Among other things, the SEP accomplishes the following: forecasts New York State energy supply and demand and the State’s ability to satisfy that demand; projects GHG emissions; identifies and assesses energy supply source alternatives and emerging trends relating to energy supply, price, and demand; assesses current energy policies and programs and their contributions to achieving long-range energy planning objectives; analyzes energy security issues; and assesses the impacts of plan implementation on economic development, health, safety and welfare, environmental quality, and consumer energy costs. Under New York Energy Law § 6-102(5), these efforts must be guided by the following objectives: “improving the reliability of the state’s energy systems; insulating consumers from volatility in market prices; reducing the overall cost of energy in the state; and minimizing public health and environmental impacts, in particular, environmental impacts related to climate change.”

³ As amended on April 8, 2020.

The NYSEPB issued the most recent SEP in 2015. As discussed in greater detail here, the 2015 SEP sets forth a broad range of goals for New York’s energy system, from attracting private investment in New York’s energy sector and encouraging competition and innovation within the energy markets, to decarbonizing New York State’s economy and putting the Empire State at the forefront in the battle against climate change, with the stated goal of reducing statewide GHG emissions 40% by 2030. Again, these goals have been accelerated by the CLCPA, which calls for 100% generation of electricity from renewable energy sources by 2040. On April 8, 2020, the SEP was amended by the NYSEPB to incorporate the CLCPA goals and now incorporates the following CLCPA targets:

- 40% reduction in GHG emissions by 2030
- 85% reduction in GHG emissions by 2050
- 70% electricity generation from renewable energy resources by 2030, and
- 100% carbon free electricity by 2040.

The NYSEPB completed the draft scope process for the next SEP, which would assess meeting future energy needs through 2040. The final scope for the SEP is expected in early 2025 leading into the Draft State Energy Plan with a public comment period in Summer 2025. Through the scoping and public comment process, the topic areas to be discussed and analyzed in the SEP are: Overview of the Energy System; Climate Change, Adaptation, and Resiliency; Environmental Justice and Climate Justice; Clean Energy Jobs and a Just Transition; Clean Energy Innovation and Economic Development; Electricity; Nuclear Energy; Fossil Fuels; Alternative Fuels; Buildings and Industry; Transportation; Smart Growth; Emergency Preparedness and Security; Assessment of Impacts of the Plan; and Local, Regional, and Federal Action and Collaboration.

Regional Greenhouse Gas Initiative

Established in 2009, the RGGI is a regional, market-based initiative designed to reduce GHG emissions across twelve northeastern and mid-Atlantic states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia. Through RGGI, participant states agreed to place a cap on GHG emissions from fossil fuel-fired electric power plants 25 megawatts (MW) in size or greater. Power plants are then given carbon dioxide (CO₂) allowances, each equal to 1 ton of CO₂, and can purchase additional CO₂ allowances through auctions. Proceeds from the auctions are reinvested into energy efficiency and renewable energy programs. Studies have confirmed that the RGGI’s cap and trade emissions program has directly or indirectly resulted in lower GHG emissions levels across the region, accounting for as much as half of the region’s emissions reductions achievements between 2009 and 2015.⁴ In 2018, the State announced the expansion of New

⁴ Murray, Brian C. and Maniloff, Peter T., Nicholas Institute for Environmental Policy Solutions at Duke University, 51 Energy Economics 581-89 (2015), available at <https://www.sciencedirect.com/science/article/pii/S0140988315002273>; Ramseur, Jonathan L., The Regional Greenhouse Gas Initiative: Lessons Learned and Issues for Congress, Congressional Research Service (May 16, 2017), available at: <https://fas.org/sgp/crs/misc/R41836.pdf>.

York's RGGI commitments, as the State targets more aggressive carbon emission reduction goals.

In the first Recommended Decision issued for a renewable project under Article 10, the New York State Board on Electric Generation Siting and the Environment (Siting Board) confirmed that large scale renewable energy generation projects contribute to the RGGI's regional GHG emissions reduction goals, and the State's overall goal of reducing GHG emissions 40% by 2030.⁵ The Repowered Facility will also contribute to the RGGI goal of reducing carbon emissions by adding up to 319,000 megawatt hours (MWh) of clean wind energy generation annually in New York State, which will be sold into the New York State electric grid pursuant to the Repowered Facility's contract with the New York State Energy Research and Development Authority (NYSERDA).

Reforming the Energy Vision Initiative

To transform the aspirational goals of the SEP into action, the New York State Public Service Commission (NYSPSC) and other state lawmakers undertook the REV initiative. Launched in 2014, the REV represented a broad effort by the Governor's Office, the NYSPSC, the NYSERDA, and others to identify regulatory, infrastructure, and market-based barriers to achievement of the SEP's goals. REV also proposes reforms that better align the State's regulatory schemes, utility tariffs, energy markets, incentive programs, procurement strategies, and allocation of resources with the goals of the SEP.

The specific short- and long-term goals of the REV initiative, as articulated on the REV fact sheet,⁶ include reducing GHG emissions by 40% from 1990 levels by 2030 and generating 50% of the energy consumed in New York through renewable sources by that same date. Additional goals include the following:

- Make energy more affordable for all New Yorkers.
- Build a more resilient energy system.
- Empower New Yorkers to make more informed energy choices.
- Create new jobs and business opportunities.
- Improve existing initiatives and infrastructure.
- Cut GHG emissions 80% by 2050.
- Protect New York's natural resources.
- Help grow clean energy innovation.

⁵ Recommended Decision in Case 14-F-0490, Cassadaga Wind pp. 152-53 (November 8, 2017)

⁶ Available at: <https://www.nyseda.ny.gov/-/media/Project/Nyserda/Files/About/Clean-Energy-Fund/REV-Fact-Sheet.pdf>

Clean Energy Standard

In August 2016, the NYSPSC adopted the Clean Energy Standard (CES) to ensure the achievement of the SEP and REV goal of reaching 50% renewable energy consumption in New York by 2030. The CES imposes mandatory renewable procurement requirements on the State’s electric utilities; establishes a system and market for awarding Renewable Energy Credits (RECs) and Zero-Emissions Credits to those injecting renewable or carbon-free power into the New York grid; directs certain changes to the ways in which New Yorkers are permitted to purchase or generate their own energy; and adopts a number of measures designed to send market signals to encourage investment by renewable developers and others in the State’s energy sector with the goal of “transform[ing] the electric system” (NYSPSC, 2016a, p. 70). “The chief focus of the CES initiative is on building new renewable resource power generation facilities” (NYSPSC, 2016a, p. 78).

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. All eligible renewable fuel types can participate in New York’s new REC market—bidding to receive one REC for each MWh of renewable energy generated that contributes to the State’s targets—and each REC will be of more or less equal value as a commodity regardless of the fuel or project type. A solar project, a wind project, and a biomass project would each receive the same REC price, as set by the market, for each MWh of energy participating in the program, regardless of how much it costs each project sponsor to produce that power. Thus, project sponsors will be incentivized to keep their costs as low as possible and to achieve as many large-scale efficiencies as possible in order to sell power profitably.

Climate Leadership and Community Protection Act

In June 2019, the New York legislature passed the CLCPA, one of the most ambitious climate protection laws in the country. The CLCPA is designed to combat climate change and set the state on a path to reach net-zero GHG emissions by 2040 (CLCPA, 2019). The CLCPA requires all state agencies to consider whether their decisions regarding permits, licenses and other approvals are consistent with or interfere with achieving the CLCPA’s statewide GHG reduction and renewable energy generation goals. In addition, the CLCPA requires the elimination of fossil fuel-fired power plants in New York by 2040—a goal toward which the State has already made progress when New York’s last coal-burning plant officially shut down in April 2020.⁷ The State has set aggressive renewable energy generation goals and achieving these goals will require the deployment of thousands of MW of new utility-scale wind and solar generation to help transition New York to a net-zero GHG emission energy portfolio.

With the passage of the CLCPA, the New York State legislature has made it clear that New York’s energy policy is focused on increased renewable energy generation in the State. New York State relies on a suite of public policy planning tools to guide State actions and initiatives in the energy

⁷ <https://news.wbfo.org/post/somerset-power-plant-shuts-down-idling-52-workers>

field, and to meet renewable energy generation and GHG emissions reductions targets. These tools and targets will continue to evolve as the State transitions to a net zero emissions future under the CLCPA. The CLCPA called for the issuance of a Final Scoping Plan under the direction of a Climate Action Council, which was released on January 1, 2023. The Final Scoping Plan evaluates technology and policy pathways across all sectors of the economy, including the energy sector, in order to identify the actions New York can take to meet the stated CLCPA goals. The Final Scoping Plan, as well as required updates over time, informs future policies and programming, including future SEPs.

The CLCPA mandates that 70% of New York’s end-use energy consumption be served by renewable energy by 2030, including specific technology-based targets. Large-scale projects like the Repowered Facility are important contributors toward that goal.

In addition, the CLCPA requires that the Climate Action Council's Final Scoping Plan prioritize and maximize reduction of greenhouse gases and co-pollutants in disadvantaged communities. To accomplish this goal, the CLCPA established a Climate Justice Working Group (CJWG) charged with developing criteria to identify Disadvantaged Communities (DACs) in New York State to ensure that frontline and otherwise underserved communities benefit from the State’s transition to cleaner sources of energy. DACs criteria developed by the CJWG was finalized on March 27, 2023. The CJWG used 45 indicators regarding “Environmental and Climate Change Burdens and Risks” and “Population Characteristics and Health Vulnerabilities” to identify 35% of New York State as DACs. The DAC list also includes 19 census tracts that are federally designated reservation territory or State-recognized Nation-owned land. A minimum of 35%, and a goal of 40%, of the benefits from the State’s investments must be directed to DACs. State agencies must also consider impacts on DACs in decision making (NYS CJWG, 2023).

The CLCPA also mandates that state agencies assess and implement strategies to reduce their GHG emissions and, when issuing permits, licenses or other administrative approvals and decisions, to consider whether such decisions would be inconsistent with the attainment of the statewide GHG emission limits. This requirement applies to the Office of Renewable Energy Siting and Electric Transmission and Electric Transmission (ORES) and recommendations by other state agencies during the Article VIII permitting process.

In December 2022, the New York State Department of Environmental Conservation (NYSDEC) issued a revision to the NYSDEC’s Commissioner Policy (CP) 49, titled “Climate Change and DEC Action.”⁸ The revisions to CP-49 reflect requirements under the CLCPA and provide guidance on implementing the CLCPA so that state agencies can accommodate climate change and future climate risks into their departmental decisions and actions. CP-49 applies to all projects involving construction of energy production.

⁸ See CP-49/Climate Change and DEC Action (Last Revised: December 14, 2022) available at: <https://www.dec.ny.gov/regulations/56552.html#:~:text=Commissioner%20Policy%2049,change%20considerations%20into%20agency%20activities>.

Accelerated Renewable Energy Growth and Community Benefit Act

To further accelerate New York’s transition to renewables, in April 2020, New York State Legislature adopted the Accelerated Renewable Energy Growth and Community Benefit Act (AREGCB Act), which established Section 94-c of the New York Executive Law, created the ORES and established a new process for permitting Major Renewable Energy Facilities. The purpose of the AREGCB Act was to “dramatically speed up the permitting and construction of renewable energy projects, combat climate change and grow the state’s green economy.”⁹ Pursuant to the directives set forth in Executive Law Section 94-c, ORES previously promulgated implementing regulations at 19 NYCRR Part 900, which, among other things, established uniform permit conditions for all solar and wind facilities, as well as a process which aimed to build more renewables faster than the prior Article 10 large-scale renewables permitting process.

The AREGCB Act also directed the New York State Public Service Commission (NYSPSC) to develop a Host Community Benefit Program. Accordingly, on February 11, 2021, the NYSPSC adopted its Order in Case 20-E-0249 to establish the Host Community Benefit Program. The Host Community Benefit Program provides benefits to utility customers in host communities where major renewable energy facilities are located. All customers, including low-income individuals and those residing in disadvantaged communities, receive a benefit that takes the form of either “a discount or credit on the utility bills of the utility’s customers in a renewable host community, or a compensatory or environmental benefit to such customers.” Through the program, the Repowered Facility will fund bill credits by paying an annual fee of \$500 per MW of nameplate capacity to the local utility.

Renewable Action through Project Interconnection and Deployment Act

Effective April 20, 2024, the Renewable Action through Project Interconnection and Deployment (RAPID) Act repealed Executive Law § 94-c and enacted a new Public Service Law article VIII entitled “Siting of Renewable Energy and Electric Transmission” (Article VIII). With respect to ORES’s regulations at 19 NYCRR part 900 (Part 900), the RAPID Act transferred part 900 to 16 NYCRR chapter XI, and continued Part 900 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. The RAPID Act also renamed ORES as the Office of Renewable Energy Siting and Transmission, transferred ORES from the Department of State to the Department of Public Service, continuing all existing functions, powers, duties, and obligations of ORES, and added new functions, powers, duties, and obligations related to major electric transmission siting. The purpose of the RAPID Act is to consolidate the environmental review, permitting, and siting of major renewable energy facilities and major electric transmission facilities, and to ensure a timely review of such projects

⁹ Governor Andrew Cuomo Announces Highlights of the FY 2021 State Budget (April 2, 2020) available at: <https://www.budget.ny.gov/pubs/press/2020/fy-2021-state-budget-highlights.html>.

to meet the State’s renewable energy goals and ensure the reliability of the electrical transmission system.

The RAPID Act does not substantively change the siting and permitting process for major renewable energy facilities, such as the Repowered Facility, as compared to the process previously required by ORES under Executive Law Section 94-c. With respect to major electric transmission facilities, the RAPID Act establishes regulatory timeframes for the review and approval of applications, mandates that ORES promulgate regulations and establish uniform standards and conditions within 12 months of the effective date of the RAPID Act (i.e. by April 1, 2025), and makes other substantive changes to the siting and permitting process for these facilities.

17.1.2 Consistency with State Energy Policies (16 NYCRR § 1100-2.18 (a))

The aforementioned planning documents, laws, and policies, which are interrelated and interdependent, are collectively meant to spur progress toward diverting New York away from the monopolistic, regulated fossil fuel-based utility market and toward a cleaner, greener, cheaper, more diverse, more flexible, and more reliable market-based renewable energy future. Projects such as the Repowered Facility will play a key role in advancing this market transformation and signify the responsiveness of the private sector to the state’s articulated goals and promised reforms. The success of these policies and laws relies on large-scale renewable energy projects like the Repowered Facility. The Applicant seeks to participate in transforming New York’s energy sector consistent with the goals of the RAPID Act, CLCPA, AREGCB Act, CES, RGGI, and SEP. Through the Repowered Facility, the Applicant seeks to contribute to New York State’s growing green economy and to play a role in the State’s high-tech, renewable energy future.

As discussed in the following subsections, the Repowered Facility is consistent with state policies that encourage the development of renewable energy projects, seek solutions to fight climate change, and emphasize the need to transition New York’s energy markets away from a reliance on fossil fuels for electricity generation. The Repowered Facility will play a key role in advancing this market transformation and signify the responsiveness of the private sector to the state’s articulated goals and promised reforms by replacing the existing 100.5 MW from the Existing Facility and adding 10 MW of clean New York-based renewable power into the grid. The Repowered Facility thus will aid in advancing the CLCPA goals, including increasing renewable energy generation to 70% by 2030 and 100% carbon-free electricity by 2040. The Repowered Facility also will protect New York’s natural resources, aid in public health protection efforts to reduce air pollution from the energy sector, help grow clean energy innovation and create new jobs and business opportunities.

Increasing Renewable Energy Generation

A core initiative in the CLCPA and SEP is new generation of renewable energy. The 2015 SEP plan notes that “conversations about the energy system of tomorrow often start with renewable energy production, and renewable resources will indeed play a critical role in shaping New York’s

energy future, providing resilient power, reducing fuel cost volatility, and lowering GHG emissions” (NYSEPB, 2015, p. 69). Not only does the SEP envision continued public investment in renewables, – such as through existing or new financing programs or NYSERDA solicitations— but, it ultimately aims to enact regulatory reforms that increase the competitiveness of renewable energy within the market, attracting companies willing to invest private dollars in New York because it makes financial sense to do so (NYSEPB, 2015, pp. 71-72).

The aggressive pursuit of renewable generation also positions New York as a model among states in the region and across the country. As the REV proceeding has repeatedly emphasized, “New York has been at the forefront of energy leadership and innovation since the earliest days of the system,” and, through REV, New York intends to lead “the transition to a clean energy economy” (NYSDPS, 2016b, p. 1). While acknowledging that small-scale renewable distributed generation sources “are a major focus of the REV strategy,” the SEP emphasizes that “central generation and transmission will continue to serve as the backbone of [the State’s] power grid” (NYSEPB, 2015, p. 70). Accordingly, the SEP emphasizes the need to encourage additional “large-scale renewables” (LSRs) in New York (NYSEPB, 2015, pp. 70-72). The immediate benefits of LSRs include economic development and jobs, greater stability in customer bills, and cleaner air (NYSEPB, 2015, p. 71). Additional direct and indirect benefits include increased property tax revenues, growth of related industries and service-based businesses, investments in modernized infrastructure, and job creation and innovation in related fields, such as training programs, manufacturing and other new opportunities in the green energy sector. Like the SEP, the CES will rely primarily on LSRs to achieve its goals relating to energy production from renewable sources.

In 2016, the total amount of energy needed for the State to meet its goal of generating 50% of the energy consumed in New York through renewable sources by the 2030 was 33,700,000 MWh of additional renewable generation (NYSPSC, 2016a, p. 36). Considerably more MWh are now needed to meet the state’s goal of 70% renewable energy by 2030. The Repowered Facility has the potential to diversify the energy sector in New York and make a critical contribution toward meeting these goals.

Contributions from land-based renewable energy projects will be particularly important in the short term because development of new large-scale hydropower dams or nuclear facilities is unlikely (NYSPSC, 2016a, pp. 5-48 to 5-49),¹⁰ and incremental contributions from technologies such as

¹⁰ The FSEIS points out that future hydroelectric development in New York will likely be limited to upgrades of existing dams to increase their capacity and/or efficiency, and the conversion of non-powered dams into energy-producing dams. The estimated maximum cumulative energy potential of additional hydropower is 240 MW (NYSPSC, 2016a, pp. 5-48 to 5-49). Further, the CES does not allow any new storage impoundment for hydroelectric facilities, which limits the capacity of any new hydroelectric facilities which might be proposed (NYSPSC, 2016, pp. 30, 106 and Appendix A).

hydroelectric, nuclear, anaerobic digesters¹¹ or biomass¹² will not be available on a large enough scale. While energy efficiency and other behind-the-meter investments will aid in advancing the goals of the CES, ultimately the incremental renewable targets will be met largely through the addition of new LSR (NYSDPS, 2016a). As proposed, the Repowered Facility would be constructed and operational by the end of 2028, which will help support achievement of shorter-term incremental renewable energy capacity targets.

To assess the Repowered Facility's consistency with the CLCPA's goal to avoid disproportionate adverse impacts from energy generation on DACs, the Applicant reviewed the CJWG's final DACs criteria and interactive map¹³ to identify DACs within the vicinity of the Facility Site and to evaluate potential impacts of the construction and operation of the Repowered Facility on potential DACs. The closest DAC, Census Tract 9608, Cattaraugus County, New York (GEOID: 36009960800), is located approximately 8.9 miles southwest of the Facility Site in the Village of Franklinville. According to the CJWG draft DAC data, this census tract has a reported environmental burden higher than 54% of Census Tracts statewide, as well as a population vulnerability higher than 66% of Census Tracts statewide. As discussed in Exhibit 19, the Repowered Facility will not result in a disproportionate adverse impact on DACs, as compared with the broader population.

Moreover, it is expected that the operation of the Repowered Facility will result in long-term environmental and economic benefits to the communities located in the vicinity of the Repowered Facility, including nearby DACs. The overall environmental benefits inherent to a wind energy generating facility, including improved air quality and a reduced dependence on traditional fossil fuels, are expected to result in long-term benefits to the region. Traditional fossil-fuel power generation has resulted in disproportionate adverse environmental impacts—particularly regarding air quality—in DACs, particularly in urban areas and communities of color. The state's transition to renewables will benefit those previously burdened communities by reducing the number and usage of fossil generation facilities, replacing them with cleaner, greener generation sources spread more broadly across the state.

Electricity delivered to the grid from wind energy projects reduces New York's dependency on the combustion of fossil fuels, mitigates growth of fossil-fuel-fired power plants, and reduces the negative consequences on public health and the atmosphere from pollutants (NYSEPB, 2015). Liu et al. (2012) looked at hospitalization rates due to respiratory diseases across New York State based on proximity to fossil-fuel-generating power plants and found significant increases in

¹¹ The FEIS estimates that approximately 53 to 54 MW of new anaerobic digester-based generation at wastewater treatment plants, particularly in the New York City area, and between 40 and 80 MW of new anaerobic digester-based generation on farms, especially dairy farms, could be available as a result of the CES and investments in the Clean Energy Fund (NYSPSC, 2016a, pp. 5-55 to 5-56). Thus, the total estimated potential contribution from anaerobic digestion across the State is between 93 and 134 MW (NYSPSC, 2016. Appendix G, pp. 36-38).

¹² Eligible biomass projects must be sustainably harvested to qualify as renewables in New York, but they nevertheless raise concerns about air emissions, including GHGs, and potential public health problems. The CES did not set forth an estimate of how much incremental renewable capacity could be derived from biomass projects, either on the small or utility scale (NYSPSC, 2016, Appendix G pp. 38-43).

¹³ CJWG Interactive Map of Communities that Meet the Draft Disadvantaged Communities Criteria is available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

estimated rates of hospitalization for asthma (11%), acute respiratory infection (15%), and chronic obstructive pulmonary disease (17%), respectively, among individuals living in a ZIP Code containing a fuel-fired power plant compared with one that had no power plant. Operation of the Repowered Facility will contribute toward the reduction in use of fossil fuels and elimination of the associated emissions across the state will not have any adverse impact on environmental justice communities.

Furthermore, the Repowered Facility is anticipated to have local, countywide, and statewide economic benefits. Specifically, utility-scale wind energy development, like other commercial development projects, can support a wide range of socioeconomic benefits including job creation, purchases of local materials and services, and direct revenue to local municipalities in the form of Payment in Lieu of Taxes Agreements (PILOTs) and Host Community Agreements (HCAs). Additionally, income generated from direct employment during the construction and operation phases of the Repowered Facility could be used to purchase community goods and services, further expanding the local economy, and income received by local landowners through lease or easement agreements can be reinvested in their communities. As a result, development of the Repowered Facility would support the CLCPA's goal of prioritizing and maximizing reduction of greenhouse gases and co-pollutants in DACs. Please see Exhibit 18 for additional information on the potential socioeconomic effects of the Repowered Facility.

Market Animation, Competition, and Innovation

Contemporary State energy policies and initiatives amount to far more than a blueprint for renewable energy procurement designed to increase renewable energy usage by New York consumers. Collectively, State energy policies and initiatives represent efforts to transform and animate regional energy markets, diversify energy supplies, overhaul regulations, and invest in the future of New York State and its communities. Two of the guiding principles of the REV initiative's targeted actions are market transformation and private sector investment, both of which are advanced by the continuation of projects like the Repowered Facility into the State's energy market.

The CES reiterates REV's guiding principles. One of the primary goals of the CES is encouraging fundamental changes in the State's energy markets to stimulate private sector investment and activity, increase competition, and send market signals that attract investment in New York's energy system (NYSPSC, 2016a, pp. 3-9). In particular, the CES Order stresses the need to encourage production of new, clean generation regardless of how and where that energy will ultimately be sold (NYSPSC, 2016a, pp. 69-70). In fact, the CES recognizes that procurement of renewable energy for use in New York is only part of the story. The portion of the REV addressing LSR, in part, was meant to be a "reassessment of New York's approach for encouraging the expansion of large-scale renewable energy generation" within the State (NYSPSC, 2016a, pp. 21-22). The goal of REV/CES is to develop "large-scale, self-sustaining, private sector-driven clean energy markets" able to drive further investments on their own (NYSDPS, 2016a, pp. 4-5).

With the emphasis on competitive electric markets necessarily comes the need to consider New York’s energy market within the context of the regional energy grid. The CES requires that RECs be allocated to each MWh of renewable energy generated which contributes to the state’s renewable targets. New York’s RECs are compatible with those of other states, allowing trading of RECs between New York and programs in nearby states, such as those in New England.

New York’s State Energy Law § 6-102(5) specifically requires the state take steps to “reduce the overall cost of energy in the state.” To that end, both the REV and SEP stress the need to move toward a market-based future where participants see the right price signals and decide to invest private capital into the system without the need for direct governmental or utility procurement of generation, thus increasing competition, building a dynamic energy market, driving efficiencies and, ultimately, reducing costs. “Enabling private capital investment to drive self-sustaining independent clean energy markets” will allow New York State to “deliver true scale to the clean energy sector, which in turn is an essential component for meaningful economic development” (NYSEPB, 2015, p 52). As NYSERDA states:

[I]n-state renewable energy investments help keep New Yorkers’ money in the State, fueling economic growth and the creation of... jobs.... It is critical to note that generation displaced by the operation of new renewable energy facilities is the most expensive generation, which sets the prices for the entire market. By displacing this generation, the wholesale electricity price paid by in-state ratepayers is reduced. (NYSERDA, 2013, pp. S-5)

The price of RECs will be determined by the market.¹⁴ This will encourage consistency and competition in the price of RECs among renewable developers and across state lines—in theory, driving down the costs and opening up competition to a broader pool of projects across the region. Each project will need to compete on its own in the electric markets, and a developer’s profits will be directly tied to its ability to contain costs so that it can offer its power on the market, or in a contract, at a competitive price. Greater competition among all types of project developers and owners will likely result in lower-cost projects, reducing electric rates for residents, businesses and industries, and freeing up capital for other purposes. Ultimately, the intention of the REV and CES is to drive additional capital investment in New York and participation in New York’s energy market—precisely what the Applicant seeks to do in proposing the Repowered Facility.

In addition, the SEP commits the State to developing “new mechanisms to facilitate voluntary market activity,” and market signals to encourage innovation and investment by private investors in New York’s economy—an objective that is reflected and refined in the CES (NYSEPB, 2015, pp. 72). This will increase competition, drive down the cost of renewable projects and energy, usher in modernization of the grid, achieve additional economies of scale through increased

¹⁴ Under the CES, REC prices essentially will be capped at the amount a load serving entity (LSE) would have to pay if it chose to make an Alternative Compliance Payment in lieu of obtaining all the necessary RECs. LSEs will have the option of choosing how to comply with the requirement—by purchasing RECs only, purchasing RECs and energy, or making Alternative Compliance Payments—most likely depending on which option carries the least cost. This also encourages competition, innovation, and efficiency among market participants.

deployment, and put LSRs “on a path to grid-parity” with other energy sources (NYSEPB, 2015, pp. 72).

The necessary investor confidence and certainty in the renewable energy markets can only be achieved if investors are able to compete freely across the market to win the best contracts or prices for their products, without the imposition of artificial and arbitrary constraints on market activity between states. Thus, even if the Repowered Facility had not been selected to receive RECs through an NYSEPB solicitation, or if it cannot find a suitable buyer in New York, its investors will still be able to look to the broader regional market, such as among New York’s RGGI counterparts, to sell some or all of its output. This increased certainty—both that New York recognizes the monetary value of the renewable attributes of green energy and that the shift toward a more open market creates multiple opportunities for projects to succeed—will encourage companies like the Applicant to make these investments here and voluntarily participate in the expanding New York market, precisely as the SEP and REV intended.

Projects like the Repowered Facility will continue to position New York as a leader in clean energy technology, innovation, and production, while helping to reduce costs and stimulate the markets to drive further private investments. Although these projects will be eligible to bid into the New York REC market to obtain contracts to purchase the renewable attributes of their power, they also will compete with other renewable generators for favorable power purchase agreements or to sell their electricity on the wholesale market in competition with other energy generators. Consistent with the market-based vision of the SEP, REV, and CES, renewable developers like the Applicant will be provided an incentive to pursue efficient, reliable, and cost-effective projects that can perform well in a market setting in order to earn a reasonable rate of return. In designing the Repowered Facility, the Applicant will have significant incentives to innovate, draw on the latest technology and advancements in infrastructure and project design, and carefully explore the quality of the wind resource to develop the most marketable project. An environment which promotes such innovation by the private sector also will be ripe for secondary economic and intellectual development in New York, as related businesses, service industries, vocational programs, and research institutions are drawn here, and existing industries and tech firms are provided with new market opportunities, jobs for skilled workers, and a pool of market participants eager to invest in future advances.

Adding to the State’s Generation Capacity

The Applicant currently plans to sell the power generated by the Repowered Facility into the state’s competitive wholesale market, which will result in a positive addition to the State’s renewable generation capacity. Not only will the Repowered Facility provide additional renewable power for consumption by New Yorkers, the Repowered Facility will contribute renewable capacity to the growing competitive electricity market in New York, displace more expensive and less efficient units, reduce the amount of power the state needs to import to meet its needs, increase reliability by providing additional renewable generation capacity which the NYISO can draw on in order to address congestion or ramp down other fossil based units, diversify the state’s energy

supply to reduce overdependence on natural gas generation, and provide the state with additional renewable capacity that does not depend on imported fuels subject to price volatility and disruptions in supply, as discussed further in the following subsections.

Fuel Diversity, Resiliency and Reliability

Another important SEP core initiative and REV goal is building a more sustainable, modern, and resilient energy system—one that can respond to rapidly changing weather and consumption patterns, recover quickly from problems, and does not depend excessively on a single fuel source to fulfill all of its needs. New York’s energy supply system suffers from “an over-dependency on natural gas” which can create significant financial and other problems for customers during cold weather events or other times of natural gas price volatility (NYSPSC, 2016b, pp. 76). Additions to the State’s—and region’s—renewable capacity diversifies fuel sources, increases grid reliability and resiliency, and supports the modernization of grid infrastructure (NYSPSC, 2016b, pp. 76-77). Such additions to the State’s renewable capacity advance the State energy planning objectives of “improving the reliability of the state’s energy systems, . . . insulating customers from volatility in market prices” and “reducing the overall cost of energy in the state,” as outlined in NY Energy Law §6-102(5).

As discussed in greater detail in Section 17.2.2, the Repowered Facility is consistent with New York’s policy of increasing fuel diversity. In 2023, approximately 51% of the state’s electricity is generated by fossil fuel-fired or nuclear generating facilities (NYISO, 2024b). The Repowered Facility will maintain the existing 100.5 MW and add up to 10 MW of wind generation to the state’s generation capacity and so contribute to diversification of the state’s energy resources.

Finally, as a generation facility that does not rely on fuels which must be sourced and delivered from other parts of the country or the world, the Repowered Facility has the ability to recover quickly, and generate energy unencumbered by transportation problems, extraction-related complications or delays, or political unrest in foreign countries—all potential issues for traditional fossil fuel facilities which rely on price-volatile commodities sourced from outside New York. The Repowered Facility thus contributes to improved system resiliency and the State’s ability to recover more quickly from significant disruptions to the grid, such as large storms or other incidents. As noted in the SEP, siting facilities throughout the state that are capable of rapid recovery during periods of disruption allows those facilities to operate independently of the central grid until the rest of the system can recover.

The SEP’s core sustainable and resilient communities’ initiative stresses the need to ensure a more modern, reliable and resilient energy grid. Approximately 81% of the state’s power generators are more than 16 years old, and 60% are more than 35 years old (NYSEPB, 2015, pp. 34-35). Projects like the Repowered Facility represent a significant opportunity to deploy new technology in an otherwise rapidly aging and often outdated energy system. As noted in the SEP, “promoting the development of clean, local energy resources” will “strengthen and improve the reliability of the grid” (NYSEPB, 2015, pp. 36). In an emergency, the availability of local wind

energy may offer opportunities to restore power to the community until connections to the central generation grid are reestablished.

17.2 DESCRIPTION OF IMPACTS

17.2.1 Reliability (16 NYCRR § 1100-2.18 (b))

The Repowered Facility will continue to contribute to the reliability of the New York electric grid, just as the Existing Facility has. The System Reliability Impact Study (SRIS) determined the Repowered Facility will not result in any degradation of system reliability or noncompliance with the NERC, NPCC, or NYSRC reliability standards that would not be managed through the normal operating procedures of the NYISO. It is assumed that the owners and operators of the proposed facilities will be subject to, and shall abide by, the applicable NYISO and/or CTO's operating procedures. Exhibit 21 Electric System Effects and Interconnection includes a description of the System Reliability Impact Study.

17.2.2 Fuel Diversity (16 NYCRR § 1100-2.18 (c))

The Repowered Facility will improve fuel diversity within the State by increasing the amount of electricity produced by non-fuel dependent wind power. According to the NYISO, “[m]aintaining and improving fuel diversity in New York will lead to less volatile electric prices, improved reliability, and positive environmental impacts” (NYISO, 2008). In the last decade, New York's generating capability from power plants using coal and oil has declined while the generating capacity of natural gas has grown (NYISO, 2020). Likewise, alternative forms of electric generation such as solar, hydro, wind and other renewables have grown in the last decade and are becoming increasingly important to maintain fuel diversity. Figure 17-1, from the NYISO's 2023 Power Trends Report (Figure 21 of the report), graphically depicts by fuel type the statewide electric energy production in New York in 2022 (NYISO, 2023).

Despite development in wind energy facilities over the past decade, currently, wind energy comprises 4% of the total energy production in New York State. Meanwhile, the CES Order identifies the state's “over-dependency on natural gas” as a significant risk to the system, particularly during cold weather events or other times of natural gas price volatility.¹⁵ Development of the Repowered Facility would maintain the existing 100.5 MW of wind energy generating capacity currently provided by the Existing Facility and add up to 10 MW to the state's renewable capacity, helping to further diversify New York's energy economy and ease New York's overdependence on natural gas and other polluting fossil fuels.

17.2.3 Regional Capacity (16 NYCRR § 1100-2.18 (d))

Since 2000, private power producers and public power authorities have added more than 13,969 MW of new generating capacity in New York State (NYISO, 2020). This additional generation

¹⁵ See Order Adopting a Clean Energy Standard, in New York State Public Service Commission Case 14-M-0101, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard (August 1, 2016) at p. 76)

represents more than 35% of New York’s current generating capacity. Over 80 percent of that new generation is located in the eastern and southern regions of New York, where power demand is greatest. New York’s wholesale electricity market design includes both the Energy Market and the Capacity Market. The Capacity Market has Regional Capacity Requirements in the import constrained Capacity Zones, known as Localities, as well as for the whole of the New York State Control Area (NYCA). The Repowered Facility will contribute its renewable capacity towards the Regional Capacity Requirements in the Localities as well as the Regional Capacity Requirements in the NYCA.

17.2.4 Electric Transmission Constraints (16 NYCRR § 1100-2.18 (e))

As noted elsewhere herein, locational requirements dictate placement of renewable resources and, as such, much of the state’s renewable power is and will be provided by projects located in the western and northern portion of the state, with the downstate region remaining host to power plants fueled primarily by natural gas. Achieving New York’s public policy objectives will require additional transmission capacity to deliver renewable resources to the bulk electric grid. Much of the current renewable power is provided by hydroelectric projects and wind farms located in western and North Country localities, while the downstate region hosts power plants fueled primarily by natural gas. Therefore, most of New York’s existing and proposed renewable generation is located in upstate New York (i.e., NYISO Zones A-F) and most of the demand (consumers of energy) is downstate (NYISO Zones F-K). The increasing renewable resource mix and geographic distribution of energy resources are expected to dramatically change power flows. Taking full advantage of statewide fuel diversity will require upgrades and enhancements of the transmission system (NYISO, 2020). These transmission enhancements will help move energy from upstate regions with a surplus of generating capacity to more populous areas with higher power demands, such as the Hudson Valley, New York City, and Long Island (NYISO, 2020).

In 2020, the NYSPSC ordered the development and consideration of proposals for implementing the provisions of the AREGCB Act with respect to distribution and transmission upgrades (PSC 2020). The NYSPSC identified four key considerations for investing in transmission and distribution infrastructure: first, identify a strong portfolio of potential transmission and distribution projects that can support the development and delivery of renewable energy in order to support climate goals; second, the contribution of those projects to the State’s climate goals must now be expressly evaluated and weighed in system planning and project prioritization, while preserving the obligation of the State’s utilities to ensure safe, reliable and cost-effective service; third, cost-containment and cost-recovery mechanisms must be reexamined, especially for projects that serve local reliability, as well as policy and systemic goals; and fourth, the planning and economic processes must continue to take fullest practical advantage of new technology and other innovation (PSC 2020).

Under the NYISO’s public policy transmission planning process, interested entities propose, and the NYSPSC identifies, transmission needs driven by public policy requirements. In response to a declared public policy need, the NYISO requests that interested entities submit proposed

solutions and evaluate the viability and sufficiency of those proposed solutions to satisfy each identified need. Following NYISO staff ranking of proposed solutions, the NYISO Board may select the more efficient or cost-effective transmission solution to each identified need. The NYSPSC has also established Tier 4 of the CES to expand available transmission capacity and bring more renewable energy to the state’s largest load center.

Any progress realized through the above efforts will only enhance the state’s electric system, which will help the Repowered Facility to provide additional benefits as well.

The Repowered Facility will interconnect to the New York power grid via a point of interconnection (POI) at the existing 34.5 kV/115kV collection substation within the Freedom Substation owned and operated by National Grid. As previously noted, the Existing Facility will be decommissioned and replaced with the Repowered Facility. It is anticipated that the Repowered Facility will not result in new electric transmission system constraints and the current interconnection infrastructure has been shown to be sufficient, as discussed in Exhibit 21.

The SRIS determined that the Repowered Facility will not result in any degradation of system reliability or noncompliance with the NERC, NPCC, or NYSRC reliability standards that would not be managed through the normal operating procedures of the NYISO. Due to its location, the Repowered Facility will supply nearby power demands and therefore reduce the power flowing on the transmission lines to supply local demand. This reduction in the flows on nearby transmission system, will reduce the transmission constraints in the vicinity of the Project. In addition to the active power, the Repowered Facility will also generate reactive power that will support the voltage in the area thereby contributing to relieving any voltage constraints to the transmission system.

17.3 COMPARATIVE ADVANTAGES AND DISADVANTAGES OF REASONABLE AND AVAILABLE ALTERNATIVE LOCATIONS (16 NYCRR § 1100-2.18 (f))

Given the unique nature and constraints associated with the siting of wind-powered electric generation facilities (i.e., adequate, and available land, willing land lease participants and host communities, and adequate access to the bulk power transmission system), the availability of alternatives to the Repowered Facility are limited.

Climate change presents a unique and urgent challenge to conventional environmental impact assessment, primarily because a “no action” alternative to taking aggressive action to address climate change will have dramatic and far-reaching impacts widely acknowledged among the scientific community, and by New York State policymakers, to be “unacceptable” (NY State Senate Bill S6599, 2019). Unlike a “no action” alternative for a shopping mall or residential housing development—where not proceeding with development equates to maintaining the status quo—the state has acknowledged that significant negative impacts will result from New York doing nothing to address climate change. Thus, a central goal of the state’s clean energy policies and mandates is facilitating the transition from fossil fuel to renewable power generation by

facilitating the siting and construction of significant new utility-scale renewable generation capacity—understanding that, while there will be environmental impacts from such new development, those environmental impacts must be weighed against the significant environmental harms of doing nothing to address the existential threat of climate change. A “no action” alternative would allow the Existing Facility, which has been operational since 2009, to continue aging.

The following three critical factors are taken into consideration when siting a utility-scale wind project:

- Proximity to a transmission line with existing capacity in an area of the state where there is a demand for renewable energy,
- Land suitable for wind turbines that is available at a price and opportunity cost that does not make the project uneconomical, and

A combination of a receptive community and suitable environment.

These criteria ensure that clean renewable energy from a facility may be injected into the electric system without incurring prohibitive cost or risk to public or environmental resources.

Given the siting constraints for the privately owned Repowered Facility, and the fact that the Existing Facility has been operating at this location since 2008, the Applicant is only able to evaluate alternatives on lands currently owned, under option to, or leased by the Applicant or its affiliates. The Applicant does not have the power of eminent domain and must work with landowners willing to participate in the proposed Repowered Facility. Consequently, the Applicant does not have the unfettered ability to locate components in any area or on any parcel of land. The Applicant has nevertheless taken many critical steps to minimize potential impacts to ecological and cultural resources within the Facility Site that could be affected by construction or operation of the Repowered Facility, while maintaining the economic viability of the Repowered Facility. These steps include studying and minimizing impacts to sensitive resources such as wetlands and cultural resources, siting components to minimize noise and visual impacts, incorporating visual screening, and burying collection lines, as is discussed elsewhere in this Application (see Exhibits 7, 8, 9, 14, and 21).

The Repowered Facility was designed to utilize the existing infrastructure and land from the Existing Facility to the extent practical; therefore, it generally occupies the same properties as the Existing Facility. Additionally, the following factors were considered when siting the new turbine locations and evaluating alternative sites:

- The Applicant was largely bound to participating properties of the Existing Facility.
- Mapped and surveyed environmental resources, including but not limited to cultural resources, wetlands, and threatened and endangered species habitat.

Turbines were located to avoid impacting environmental resources to the extent practical.

- Fifteen-plus years of existing meteorological evaluation tower (MET) data. Real time data was used to evaluate the most efficient turbine locations. The Repowered Facility will reduce the total number of turbines from 67 to a maximum of 34.

Micro-siting field evaluations shifted proposed turbine locations to ensure maximum engineering practicability and minimizing impacts to environmental resources that were not visible using mapping tools. To determine where best to site wind turbines, the Applicant considered existing land cover, proximity and number of nearby potentially sensitive receptors, slope and aspect, accessibility, agricultural resources, and potential wildlife habitat, wetland, stream, visual, and cultural resource impacts.

17.4 PUBLIC HEALTH AND WELFARE (16 NYCRR § 1100-2.18 (g))

According to the NYSPSC, “[f]or New York, the need and ability to take steps to combat climate change is immediate.” (NYSPSC, 2016a). “Climate change will cause not only sea level rise, heat waves, and extreme weather events, but also threatens massive economic and lifestyle disruption from damage to agriculture, water resources, public health, energy and communication systems, and the natural ecosystems that define and support communities” (NYSPSC, 2016a, pp. 4). The Repowered Facility contributes toward the state’s overall strategy for combating climate change and the many public health and environmental threats anticipated to result from climate change. Overall, the Repowered Facility is anticipated to have long-term beneficial effects on the environment by reducing the need for the State to rely on fossil fuels. By helping to reduce the need for the State’s dirtiest, most polluting fossil fuel-burning plants, the Repowered Facility will help New York continue the fight to reduce harmful air emissions, from greenhouse gases driving climate change to the toxic compounds sickening millions of people.

All power generation results in some environmental impact. Yet the environmental impact of constructing renewable power generation must be balanced against the environmental benefits of transitioning from fossil fuel generation to renewables, and the extent to which the contribution of renewables toward the State’s fight against climate change outweighs those impacts which are anticipated from an individual facility. For example, as discussed in Exhibit 12, wind facilities can have an impact on bird species that use the lands proposed for the siting of wind turbines as hunting or foraging habitat. These impacts must be considered in light of the threats posed to bird species by climate change, as well as by other methods of power generation. According to a recent study by the Audubon Society, climate change could result in the mass extinction of an estimated 389 species of birds (Wilsey et al. 2019). Specifically, there are 56 bird species designated as highly vulnerable to climate change that use areas of New York state for either summer or winter habitat (Audubon Society, 2025). Further, some estimates posit that fossil fuel power generation results in approximately 9.4 bird fatalities per gigawatt hour of power

produced—a significant existing threat to birds which would be mitigated by the transition to renewable energy generation (Sovacool, 2013).

Generally, the Repowered Facility will promote the public health and welfare by reducing New York’s dependency on the combustion of fossil fuels (coal, petroleum, and natural gas) which not only have negative consequences for public health but also the atmosphere and the environment (NYSEPB, 2015). Air pollution, water pollution and climate change have both short-term and long-term adverse effects on public health and the planet. Electricity generated from zero-emission wind energy facilities like the Repowered Facility will assist in combating climate change and have a positive impact on the environment, public health and welfare by producing enough electricity to power over 19,800 households and displacing the electricity generated from conventional power plants, thereby reducing emissions of conventional air pollutants, such as mercury and sulfur and nitrogen oxides, and GHGs (e.g., carbon dioxide).¹⁶ Wind facilities also avoid water pollution that can result from the extraction, disposal, and transportation of fuels, and avoid thermal pollution to waterways typical of other traditional power plants, such as the nuclear facility at Nine Mile Point. Further discussion of the public health benefits of renewable energy, particularly as it relates to air emissions, is included in Exhibit 6 (see Table 6-1).

The Applicant has used the following assumptions to calculate the amount of carbon emissions that will be avoided as a result of the Repowered Facility: (1) there are 8,760 hours in one year; (2) the Repowered Facility will generate 110.5 MW of electricity; (3), the capacity factor of the Repowered Facility, as determined by the Production Profile of the Repowered Facility is 0.33; and (4) the conversion factor of 1000 kwh/mwh. Using this information: $8760 \times 110.5 \times 0.33 \times 1000 = 319,433,400$ kwh. The energy produced was entered into the EPA Greenhouse Gas Equivalences Calculator for kwh of carbon emissions avoided.¹⁷ The resulting calculation gives an initial answer as 214,600 metric tons. The webpage has an option to convert the answer to pounds, kilograms, and tons and the Applicant has chosen to use tons as the unit.

Likewise, the Repowered Facility’s location within a landscape of the Existing Facility supports the current and on-going energy-specific land use of the area, and these facilities have demonstrated compatibility with public health and welfare. The proposed Repowered Facility will promote public health and welfare by properly balancing the siting constraints discussed herein to avoid, minimize, and mitigate impacts to the maximum extent practicable, while also providing the environmental and public health benefits associated with renewable energy generation and aiding the State in achieving the CLCPA goals.

¹⁶ Based on the U.S. Environmental Protection Agency’s (EPA’s) Avoided Emissions and Generation Tool (AVERT), the Repowered Facility’s load profile will displace the annual electricity consumed by 19,800 average homes in the United States. AVERT Web Edition is a publicly accessible model that is capable of evaluating how the operation of a new renewable energy project can offset traditional fossil fuel energy generation and change the emissions of common air pollutants at a county, state, or regional level. Available at: <https://www.epa.gov/avert/avert-web-edition>.

¹⁷ EPA’s Greenhouse Gas Equivalencies Calculator, Updated November 2024, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results>

Despite the significant amount of undeveloped land in upstate New York, the number of viable sites for utility-scale wind development are relatively few. Optimally, as with the case of this Repowered Facility, utility-scale wind projects should be sited on available, open land with few sensitive resources present. This proposed facility is a repowering of an existing wind park, therefore, the Repowered Facility will reuse land that has been used for renewable energy generation for years prior to the repowering.

Areas within 5-miles of the Facility are used predominantly for rural-residences, agricultural use, or are defined by the New York State Office of Real Property Services as vacant land. Prominent features also include Lost Nation State Forest and Cold Creek State Forest (see Exhibit 3 for a more detailed analysis). In addition to its consistency with the rural agricultural character in terms of land use, the Repowered Facility is also consistent with the surrounding land use goals of the local communities, particularly because it advances renewable energy options, will support the local economy, and landowner payments will allow some farms in the area to continue active operations outside the Facility Site. Furthermore, utility-scale wind projects must be located in proximity to a suitable point of interconnection with the local utility to minimize interconnection costs. Significant interconnection costs can easily render a wind project uneconomic. Exhibit 6 provides further information regarding how the Repowered Facility promotes public health and welfare.

17.5 UNIFORM STANDARDS AND CONDITIONS

There are no applicable Uniform Standards and Conditions for this exhibit.

17.6 REFERENCES

- Audubon Society. 2025. How Climate Change Will Affect Birds in New York. Available at: <https://www.audubon.org/climate/survivalbydegrees/state/us/ny>. (Accessed January 2025).
- Climate Leadership and Community Protection Act (CLCPA). 2019. *New York State Climate Act*. Available at: <https://climate.ny.gov/> (Accessed December 2024).
- Liu, Xiaopeng, Lawrence Lessner, and David Carpenter. 2012. “Association between Residential Proximity to fuel-Fired Power Plants and Hospitalization Rate for Respiratory Diseases.” *Environmental Health Perspectives*. Available at: <https://doi.org/10.1289/ehp.1104146> (Accessed December 2024)
- New York Independent System Operator (NYISO). 2008. *Fuel Diversity in the New York Electric Market, A NYISO White Paper*. Available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B552F2777-5024-4638-9F1C-10F78A100A71%7D> (Accessed December 2024).

NYISO. 2020. *Power Trends Report 2020*. Available at: <https://www.nyiso.com/documents/20142/2223020/2020-Power-Trends-Report.pdf/dd91ce25-11fe-a14f-52c8-f1a9bd9085c2>. (Accessed December 2024).

NYISO. 2023. *Power Trends Report 2023*. Available at: <https://www.nyiso.com/documents/20142/2223020/2023-Power-Trends.pdf/7f7111e6-8883-7b10-f313-d11418f12fbf?t=1695216768104>. (Accessed December 2024).

NYISO. 2024a. *2023-2042 System & Resource Outlook (The Outlook)*. Available at: https://www.nyiso.com/documents/20142/46037414/2023-2042-System-Resource-Outlook.pdf/8fb9d37a-dfac-a1a8-8b3f-63fbf4ef6167?t=1721752637474_ (Accessed January 2025).

NYISO. 2024b. *Power Trends Report 2024*. Available at: https://www.nyiso.com/documents/20142/2223020/2024-Power-Trends.pdf/31ec9a11-21f2-0b47-677d-f4a498a32978_ (Accessed January 2025).

New York State Energy Planning Board (NYSEPB). 2015. *2015 New York State Energy Plan*. June 25, 2015.

New York State Energy Research and Development Authority (NYSERDA). 2013. *Renewable Portfolio Standard Main Tier 2013 Program Review: Direct Investments in New York State: Summary*. September 5, 2013.

New York State Department of Public Service (NYSDPS) Staff. 2016a. *Staff White Paper on Clean Energy Standard*. Case 15-E-0302 Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard. January 25, 2016.

NYSDPS Staff. 2016b. *Staff White Paper Summary of REV*. March 2016. Available at: <https://www.ny.gov/sites/default/files/atoms/files/WhitePaperREVMarch2016.pdf> (Accessed December 2024).

New York State Climate Justice Working Group (NY CJWG). 2023. *New York State's Disadvantaged Communities Criteria Fact Sheet*. Available at: https://climate.ny.gov/-/media/Project/Climate/Files/Disadvantaged-Communities-Criteria/LMI-daccriteria-fs-1-v3_acc.pdf (Accessed January 2025).

New York State Public Service Commission (NYSPSC). 2016a. *Order Adopting a Clean Energy Standard (CES Order)*. Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard. August 1, 2016.

NYSPSC. 2016b. *Final Supplemental Environmental Impact Statement (FSEIS)*. Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, and Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision. May 19, 2016.

NYSPSC. 2020. *Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*. Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act. May 14, 2020.

Sovacool, Benjamin. 2013. *The Avian and Wildlife Costs of Fossil Fuels and Nuclear Power*. Journal of Integrative Environmental Sciences V 9 (4), pages 255-278. Available at: <https://www.tandfonline.com/doi/full/10.1080/1943815X.2012.746993> (Accessed December 2024).

Wilsey, C., B. Bateman, L. Taylor, J.X. Wu, G. LeBaron, R. Shepherd, C. Koseff, S. Friedman, and R. Stone. 2019. *Survival by Degrees: 389 Bird Species on the Brink*. National Audubon Society: New York. Available at: <https://nas-national-prod.s3.amazonaws.com/climate-report-2019-english-lowres.pdf> (Accessed December 2024).