

1.0 DESCRIPTION OF PROPOSED ACTION

1.1 PROJECT SUMMARY/INTRODUCTION

This Supplemental Environmental Impact Statement (SEIS) has been prepared for the proposed Jericho Rise Wind Farm (the Project). Jericho Rise Wind Farm LLC (the Applicant), a wholly owned subsidiary of EDP Renewables (EDPR), is proposing to construct a wind energy generation facility (and associated necessary Project infrastructure) in the Towns of Chateaugay and Bellmont in Franklin County, New York (see Figure 1). The potential environmental impacts of the proposed Project are being reviewed under the State Environmental Quality Review Act (SEQRA) with the Towns of Chateaugay and Bellmont serving as Co-Lead Agencies.

The following terms are used throughout this document to describe the proposed action:

Applicant. Refers to Jericho Rise Wind Farm LLC, formerly Burke Wind Power LLC, a wholly owned subsidiary of EDPR.

Project. Refers to all activities associated with the construction, operation, and individual components of the Jericho Rise Wind Farm, including, but not limited to, turbines, electrical collection lines, access roads, laydown areas, and other facilities.

Project Site. Refers to the parcels of land where the Project will be placed. Jericho Rise Wind Farm LLC has obtained consent from all landowners hosting project facilities within the Project Site (See Wind Energy Permit Application Requirement #2 - List of Property Owners, submitted separately).

As described in greater detail below (see Section 1.12 of this SEIS), the SEQRA review of the Project began in 2007. This SEIS has been prepared to build upon the information and analysis presented in the 2008 Draft Environmental Impact Statement (DEIS) that was previously prepared for the Project. This SEIS addresses all changes to the proposed action that have occurred subsequent to the release of the DEIS, and includes additional studies and analyses. In general, the SEIS does not reiterate information from the previous DEIS that remains accurate and unchanged. In addition, the SEIS is not a comprehensive response to public/agency comments received on the DEIS; however, the SEIS does address substantive issues that were raised in these comments. A comprehensive responsiveness summary, which will specifically respond to all substantive comments received on both the DEIS and SEIS, will be included in the Final Environmental Impact Statement (FEIS) for the Jericho Rise Wind Farm. The FEIS will be prepared and published for public review subsequent to the issuance of this SEIS.

The Project will consist of up to 37 wind turbine generators (WTG) each with a nameplate capacity of 2.1 megawatts (MW), for a total anticipated nameplate generating capacity of 77.7 MW. However, to allow for flexibility on final site selection, the Applicant is also evaluating and seeking approval for seven alternate turbine sites, for a total of up to 44 sites being assessed in this SEIS. The total project size is limited by the interconnection request approved by the New York Independent Systems Operator at 77.7 MW. The WTGs that will ultimately be constructed for the Project have not been determined. However, the largest WTGs presently being considered for the Project are the Gamesa G114-2.1 WTGs. For the purpose of presenting a conservative analysis, the assessment of potential environmental impacts throughout this SEIS assumes that the Project will use Gamesa G114-2.1 WTGs. Each WTG consists of three major mechanical components: the tower, nacelle, and rotor. Assuming use of the Gamesa G114-2.1 turbine, the anticipated tower height for the Project, or “hub height” (height from foundation to the rotor hub), is approximately 93 meters (305 feet). The Gamesa G114-2.1 has a rotor diameter of 114 meters (374 feet), resulting in a total height of 150 meters (492 feet). Additional information regarding the physical characteristics of the Gamesa G114-2.1 turbines is included in Section 1.5 of this SEIS.

All of the proposed turbines will be the same make and model. In addition to the WTGs, the Project will include construction and operation of one permanent meteorological (met) tower, a system of gravel access roads, electrical collection and communication cable networks, an operations and maintenance (O&M) facility, a collection system substation, and a point of interconnection (POI) switchyard. The Project will also require a temporary laydown yard and construction work space, including, but not limited to, areas to store Project components (laydown yards), construction vehicle parking areas, and cleared areas for turbine assembly (turbine workspaces). These Project components are described in greater detail below in Section 1.5 of this SEIS. The current Project layout is depicted in Figure 2.

The current Project Site is very similar to the Project Site previously identified in the original wind energy permit applications to the Towns and in the DEIS. There is significant overlap between the areas studied/identified in the DEIS as compared with the Project layout described in this SEIS. For example, 18 of the 44 proposed wind turbine locations are within 500 feet of the wind turbine locations proposed in the DEIS and 32 of the 44 proposed locations are within 1,000 feet of the wind turbine locations proposed in the DEIS.

However, there are some differences between the current Project layout and the DEIS layout. Generally, the changes in the Project since the DEIS relate to the deletion of turbines and the removal of the northeastern area of the Project. These differences are depicted in Figure 3 and summarized below in Table 1. Layout changes have been made primarily to accommodate the larger Gamesa G114 2.1 MW wind turbine, but also to accommodate study results, agency and landowner feedback.

Table 1. Comparison of DEIS and SEIS Project Layouts

Project Component	Current (SEIS) Project Layout	2008 (DEIS) Project Layout
Wind Turbine Model	Gamesa G114-2.1 2.1 MW Hub Height: 93 meters (305 feet) Rotor Diameter: 114 meters (374 feet) Total Height: 150 meters (492 feet)	Vestas V-82 1.65 MW Hub Height: 80 meters (262 feet) Rotor Diameter: 82 meters (269 feet) Total Height: 121 meters (397 feet)
Number of Wind Turbines	37 (+7 alternates = 44)	53
Number of Met Towers	1	4
Length of Access Roads	10.3 miles (+2 miles for alternates)	15 miles
Length of Collection Lines	17.2 miles (+3.7 miles for alternates)	21 miles

As indicated in Table 1, the Applicant is proposing the use of a taller WTG with a larger rotor diameter (relative to what was considered in the DEIS) to maximize energy production based on the site-specific wind resource analyses. Fewer turbines are proposed in the current layout as a result of the increased nameplate capacity of the larger WTG. The Applicant has applied for waivers pursuant to Article V of the Town of Chateaugay Wind Energy Facilities Local Law No. 7 of 2006 and Article V of the Town of Bellmont Wind Energy Facilities Law No. 2 of 2006. These waivers are further discussed in Section 2.13 of this SEIS. Taller turbines can create the potential for impacts due to setback issues, the potential for increased visibility, and higher rotor swept zones. However, when compared to a larger number of shorter turbines, the overall benefits associated with the energy production at the taller height and the net reduction of impacts due to fewer turbines outweigh the relatively minor differences in potential environmental impacts. See Section 4.0 of this SEIS for additional analysis of Project alternatives.

1.2 PROJECT LOCATION

As described in the DEIS, the Project is located in the Towns of Chateaugay and Bellmont in Franklin County, New York (see Figure 1). The current Project Site includes approximately 5,895 acres of leased private lands that are roughly bound by State Route 11 to the north, the Chateaugay River to the east, Brainardsville Road to the south, and the Burke/Chateaugay town boundary to the west (see Figure 2). General physiography and land use within the Project Site remain as described in the DEIS. The current Project Site is largely within the Project Area that was defined for the DEIS.

1.2.1 Project Participation

The Applicant has secured sufficient acreage under lease and easement option agreements to construct the Project. Approximately 55 landowners are participating in the Project. These landowners control the 106 parcels of land that make up the Project Site.

1.3 PROJECT FACILITY OWNER/DEVELOPER/OPERATOR

Jericho Rise Wind Farm LLC, is a wholly owned indirect subsidiary of EDP Renewables (EDPR). EDPR develops, constructs, owns, and operates wind farms throughout the United States. Wind farms developed by EDPR are currently operating in New York, Iowa, Illinois, Indiana, Pennsylvania, Oklahoma, Texas, Oregon, Minnesota, Washington, and Kansas. Operating EDPR assets in New York State include the Marble River Wind Farm in Clinton County (wholly owned by EDPR), the Maple Ridge Wind Farm in Lewis County (50 percent owned by EDPR), and the Madison Wind Farm in Madison County (wholly owned by EDPR). At the end of 2014, EDPR owned approximately 3,805 MW of operating wind energy capacity in North American with an additional 299 MW under construction. In New York State, approximately 400 MW of wind energy projects are currently under development.

1.4 PROJECT PURPOSE, NEED, AND BENEFIT

This section describes the purpose of the Project, how it would help meet economic and environmental needs, and how the proposed action is consistent with goals, objectives, orders, and directives issued by the executive and legislative branches of the United States and New York governments. This information has been updated relative to the discussion presented in the DEIS due to the changes in the proposed Project layout (and wind turbine model) as well as significant legislative and policy initiatives that have occurred subsequent to the publication of the DEIS in 2008 that further encourage renewable energy projects such as the Jericho Rise Wind Farm and explain the need for energy generation from renewable sources such as wind.

1.4.1 Project Purpose

As described in the DEIS, the purpose of the proposed Project is to create an economically viable wind-powered electrical-generating facility that will provide a source of renewable energy to the New York power grid to:

- Satisfy regional energy needs in an efficient and environmentally sound manner;
- Supplement and offset fossil-fuel electricity generation in the region, with emission-free, wind-generated energy;
- Reduce the amount of electricity imported to New York State;

- Realize the full potential of the wind resource at the Project Site;
- Provide energy that is not susceptible to fluctuations in commodity prices;
- Produce electricity without the generation of carbon dioxide or other greenhouse gases that contribute to climate change;
- Promote the long-term economic viability of rural areas in New York; and
- Assist New York State in meeting its proposed Renewable Portfolio Standard and State Energy Plan goals for the consumption of renewable energy in the State (see below).

The Project is expected to have an average annual net capacity factor (NCF) of approximately 31-32%. Annual NCF is a means of measuring the productivity of a wind power project (or another power production facility). This factor provides a comparison between the actual production of a facility over the course of a year and the potential production if the facility was running at full capacity for the full year. A 31-32% NCF means that on average, a facility will generate approximately 31-32% of its potential output over a given year. For a wind project, this does not mean that it will be generating power only 31-32% of the time (the turbines may actually be generating power 65% to 90% of the time, just not always at full capacity), but rather the Project will generate approximately 31-32% of its potential maximum output over the course of each year.

Total net electricity delivered to the existing New York power grid is expected to be approximately 211,002 to 217,809 megawatt hours (MWh) (i.e., 37 turbines x 2.1 MW x 24 hours/day x 365 days x 31-32% NCF). This is enough electricity to meet the average annual consumption of approximately 30,000 households, based on the average annual electric consumption of 7.2 MWh for New York State residences (U.S. Energy Information Administration [EIA], 2015a).

1.4.2 Public Need and Benefits to Be Derived From Project

The public need and benefits from the Project are best understood in the context of the challenges posed by addressing climate change and energy issues facing New York State. The immediate benefits of utility scale renewable projects, such as the Jericho Rise Wind Farm, include economic development and jobs for the community, greater stability in customer bills, cleaner air, and compliance with State and Federal mandates. In the long run, as recognized by the newly issued State Energy Plan, benefits may be similar to those New York enjoys from the State's hydroelectricity facilities today, below-market electricity prices and a healthier environment.

The Project will help the State achieve its goals of reducing carbon emissions that contribute to climate change in the electricity generation industry.

Global climate change has been recognized as one of the most important environmental challenges of our time. (See New York State Climate Action Plan Interim Report, November 2010; DEC's Commissioner Policy 49, issued October 22, 2010; DEC Guidance Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements, issued July 15, 2009). There is scientific consensus that human activity is increasing the concentration of greenhouse gases (GHGs) in the atmosphere and that this, in turn, is leading to serious climate change. By its nature, climate change will continue to impact the environment and natural resources of the State of New York. (See DEC Guidance). Historically, New York State has been proactive in establishing goals to reduce GHG emissions, including Executive Order 24, which seeks to reduce GHG emissions by 80% by the year 2050 and also includes a goal to meet 45% of New York's electricity needs through improved energy efficiency and clean renewable energy by 2015. (See New York State Executive Order 24). The overwhelming majority of CO2 emissions in New York – estimated at approximately 250 million tons of CO2 equivalent per year- from result fuel combustion. Overall fuel combustion accounts for approximately 89% of total GHG emissions in New York State.

In an effort to encourage and incentivize the shift of New York State's energy sector from reliance on GHG emitting fuel sources to renewable energy sources, the State has established a Renewable Portfolio Standard (RPS) which initially called for an increase in renewable energy used in the State to 25% by the year 2013 (PSC, 2004). Following a comprehensive mid-course review and in an effort to further spur renewable energy project development, in an Order issued in January 2010, the New York Public Service Commission (PSC) expanded the RPS target from 25% to 30% and extended the target date from 2013 to 2015. The RPS is expected to reduce CO2 emissions by 50 million tons over the life of the projects (NYSERDA, 2015).

Unlike other states with an RPS, in New York, the New York State Energy Research and Development Authority (NYSERDA) is responsible for obtaining the targets established in the RPS through competitive bidding and contract procurements. As of the date of this SEIS, NYSEDA has conducted 10 Main Tier (larger, utility scale resources) solicitations in pursuit of the RPS target. From the nine completed solicitations, NYSEDA currently has contracts with electricity generators for 65 large-scale projects, including the Jericho Rise Wind Farm Project (NYSERDA, 2015). These projects will add more than 2,035 MWs of new renewable capacity to the State's energy mix. However, as of December 2014, the State, through NYSEDA, has only procured enough renewable energy to meet 56% of the RPS targets. (NYSERDA, 2015).

The PSC has extended the original target of 30% by 2015 and has authorized NYSEDA to issue additional solicitations in 2015 and in the future if NYSEDA determined that market conditions were appropriate. As part of this authorization, NYSEDA has proposed a comprehensive Clean Energy Fund (CEF) to ensure continuity of the State's clean energy programs after 2015. The CEF is one part of New York State's Reforming the Energy Vision (REV)

initiative, a 10-year \$5 billion funding program to support clean energy market development and innovation and to secure renewable energy resources as part of New York's clean energy future. As stated by the PSC in the REV Order, "A significant increase in the penetration of renewable resources is essential to meeting our objectives, state goals and proposed federal requirements" (PSC, 2015).

As mentioned above, in NYSERDA's latest completed RPS solicitation, Jericho Rise Wind Farm was awarded a contract for procurement and the opportunity to contribute to NYSERDA meeting the targets in the RPS.

The Project will also help the State achieve the goals of the 2015 State Energy Plan. State Energy Law 6-104 requires the State Energy Planning Board to adopt a State Energy Plan. The latest iteration of the New York State Energy Plan was announced on June 25, 2015. The State Energy Plan contains a series of policy objectives and coordinates with the REV initiative and the objectives to increase the use of energy systems that enable the State to significantly reduce GHG emissions while stabilizing energy costs. According to the Plan, the Plan is a "comprehensive strategy to create economic opportunities for communities and individual customers throughout New York." Through the State Energy Plan, New York has committed to achieving a 40% reduction in GHG emissions from 1990 levels by 2030 and reducing total carbon emissions 80% by 2050. In addition, the State Energy Plan calls for 50% of generation of electricity from renewable energy sources by 2030. According to the Plan, "Renewable Energy sources, such as wind, will play a vital role in reducing electricity price volatility and curbing carbon emissions" (NYSEPB, 2015). Jericho Rise Wind Farm fully advances the objectives of the State Energy Plan and assists the State in achieving the 50% renewable energy generation objective.

Further, federal policy has recognized the need for increased supply of energy to the U.S., and for new renewable energy resources. The Project fulfills a need for the production and transmission of renewable energy, which would serve the public interest. The Project is consistent with Executive Order 13212 (dated May 18, 2001), which states, "The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy."

On June 25, 2013, President Obama announced the Climate Action Plan, a national plan for tackling climate change. The three sections of the Plan focus on 1) steps to cut carbon pollution in the United States, including standards for both new and existing power plants, 2) actions to prepare the U.S. for the impacts of climate change, and 3) plans to lead international efforts to address global climate change. The Plan directs the Environmental Protection Agency (EPA) to establish the first ever restrictions on carbon pollution from power plants, the largest source of unregulated

CO2 emissions in the U.S. It also fast-tracks permitting for renewable energy projects on public lands; increases funding for clean energy technology and efficiency improvements; calls for improved efficiency standards for buildings and appliances, as well as heavy trucks; establishes the first-ever Federal Quadrennial Energy Review to encourage strategic national energy planning; and outlines plans for cutting greenhouse gas emissions from hydrofluorocarbons and methane. The Plan states, “With abundant clean energy solutions available, and building on the leadership of states and local governments, we can make continued progress in reducing power plant pollution to improve public health and the environment while supplying the reliable, affordable power needed for economic growth. By doing so, we will continue to drive American leadership in clean energy technologies” (Executive Office of the President, 2013).

In fulfillment of President Obama's commitment under the 2013 Climate Action Plan, EPA proposed “Clean Power Plan” regulations in 2014 establishing a framework for states to regulate carbon dioxide emissions from existing fossil fuel-fired electric generating units. (See 79 Federal Register 34830; June 18, 2014). Once the guidelines are issued, states must develop plans that explain how they will achieve those guidelines. Nationwide, the proposal calls for reducing CO2 from the power sector by approximately 30% from 2005 emission levels by 2030. The proposal establishes emission rate-based CO2 goals for each state as well as guidelines for the development, submission and implementation of state plans to achieve those goals. The proposal relies on four basic building blocks: (1) reducing the carbon intensity of generation at individual units through heat rate improvements; (2) substituting less carbon-intensive generating units (e.g., replacing coal with natural gas); (3) increasing reliance on low or zero-carbon generation sources such as solar and wind; and (4) increasing reliance on demand-side energy efficiency programs. Each state must then develop a plan that explains how they intend to achieve their state-specific CO2 emission rate goal that includes enforceable CO2 emission limits applicable to each affected unit. EPA plans to finalize the rule by summer 2015; state plans would be due by June 30, 2016. States would be expected to begin making CO2 emission reductions by 2020, with full compliance to be achieved by 2030.

In support of the President's efforts to diversify the U.S's clean energy mix, the U.S. Department of Energy (2015a) recently issued its “Wind Vision” which concluded that the benefits of wind energy are substantial and include:

- **Wind energy is available nationwide.** The Wind Vision Report shows that wind can be a viable source of renewable electricity in all 50 states by 2050.
- **Wind supports a strong domestic supply chain.** Wind has the potential to support over 600,000 jobs in manufacturing, installation, maintenance, and supporting services by 2050.
- **Wind is affordable.** As wind generation agreements typically provide 20 year fixed pricing, the electric utility sector is anticipated to be less sensitive to volatility in natural gas and coal fuel prices with more wind. By

reducing national vulnerability to price spikes and supply disruptions with long-term pricing, wind is anticipated to save consumers \$280 billion by 2050.

- **Wind reduces air pollution emissions.** Wind energy can help avoid the emission of over 250,000 metric tons of air pollutants, which include sulfur dioxide, nitric oxide, nitrogen dioxide, and particulate matter, as well as 12.3 gigatonnes of greenhouse gases by 2050.
- **Wind energy preserves water resources.** By 2050, wind energy can save 260 billion gallons of water—the equivalent to roughly 400,000 Olympic-size swimming pools—that would have been used by the electric power sector.
- **Wind deployment increases community revenues.** Local communities will be able to collect additional tax revenue from land lease payments and property taxes, reaching \$3.2 billion annually by 2050.

Progress in the State RPS program through December 31, 2014 has yielded, and is expected to continue to yield, significant economic benefits to New York State and local communities. Economic benefits accrue from the planning, development, construction, and operation of renewable energy facilities. The Main Tier (large or utility scale) of the RPS is expected to generate \$2.6 billion of direct economic investment in New York, at a benefit-cost ratio of \$5-\$1. This analysis also determined that for every 1 MWh of renewable energy generated under the RPS, approximately \$27 is directly invested in New York State by RPS facilities (NYSERDA, 2015). The RPS has added approximately 650 jobs annually to New York's workforce. In addition, every dollar invested in New York energy resources remains in New York State, helping to reduce the dollars New Yorkers are currently sending out of state for economy-wide energy costs, estimated to be nearly \$39 billion in 2012 (NYSERDA, 2014).

All of these economic and environmental benefits have occurred in New York with total RPS program costs expected to comprise less than 0.2% of total retail electricity expenditures, and perhaps more importantly, a cumulative net rate impact of essentially zero due to wholesale electricity price reductions resulting from the RPS program.

In addition to helping achieve the State and Federal goals described above, implementation of the proposed action will result in other socioeconomic, environmental, and human health benefits, each of which are briefly summarized below.

Socioeconomic Benefits

- Increased revenues to local municipalities, through PILOT and other agreements.
- Employment during the development phase. Where feasible, the Applicant has utilized locally based companies to undertake environmental field work, legal counsel, engineering assessments, etc.
- Short-term employment of construction workers and long-term employment of operations personnel.
- Direct lease payments to participating landowners, who are participating in the Project on a voluntary basis.

- "Direct economic effects" in the form of immediate payments to consultants, contractors, and the labor pool required to develop, build, and operate the Project.
- "Induced effects" in the form of everyday purchases made by the firms and employees working in the vicinity of Project Site (e.g., groceries, gas and supplies, hotel accommodations, patronization of local establishments, etc.).

Environmental Benefits

- Within the New York electricity market, wind-generated electricity typically displaces the use of fossil fuels in conventional power plants, producing a reduction in the emission of key air pollutants; sulfur dioxide and nitrogen oxides (acid rain precursors); mercury; and carbon dioxide (a contributor to global climate change). NYSEEDA found that if wind energy supplied 10% (3,300 MW) of the state's peak electricity demand, 65% of the energy it displaced would come from natural gas, 15% from coal, and 10% from electricity imports. This equates to an annual displacement of 6,400 tons of nitrogen oxides and 12,000 tons of sulfur dioxide (GE Energy, 2005).
- Energy efficiencies and renewable generation together will reduce New York's greenhouse gas emissions, helping to achieve the State's CO2 reduction goals (NYSEPB, 2009, 2014).
- The well-being of some ecosystems in the northeastern U.S., including New York State, is at serious risk as a result of the negative environmental externalities associated with fossil fuel based power plant emissions. Research conducted by scientists from the Hubbard Brook Research Foundation concluded that "hotspots" throughout the Northeastern U.S. have levels of mercury deposition "10 to 20 times higher than pre-industrial conditions, and 4 to 5 times higher than current EPA estimates". This research highlights "the connection between airborne mercury emissions from United States sources and the existence of highly contaminated biological hotspots...Emission reductions from high-emitting sources near biological hotspots in the United States will yield beneficial improvements in both mercury deposition and mercury levels in fish and wildlife" (Driscoll et al., 2007).
- The Project will not require to use of water or water resources to generate electricity. Protection/conservation of surface and groundwater resources is a significant environmental concern and the development of electricity generation that is not reliant on water resources is extraordinarily important.

Human Health Benefits

- Airborne mercury, released primarily by coal-fired power plants, has contaminated numerous rivers, lakes, and streams across the State. While eating fish from State water bodies is not prohibited, the New York State Department of Health (NYSDOH) has issued advisories pertaining to fish consumption from certain

waterbodies. Pregnant women, women who may become pregnant, or children under the age of 15 are advised not to consume any fish, at any time, from any of the listed waterbodies (NYSDOH, 2014).

- Sulfur dioxide and nitrogen oxide emissions react with volatile organic compounds in the atmosphere (i.e., gasoline vapors or solvents) and produce compounds that can result in severe lung damage, asthma, and emphysema (Wooley, 2000).
- Researchers at the Harvard School of Public Health estimated that air pollution from conventional energy sources across the U.S. kills between 50,000 and 70,000 Americans every year (Levy et al., 2000).
- Research undertaken by the American Cancer Society, Harvard School of Public Health, and the Environmental Protection Agency shows that residents in every single state across the Nation were at risk of premature death from air pollution (Cooper & Sovacool, 2007).

1.5 PROJECT FACILITY LAYOUT AND COMPONENTS

1.5.1 Facility Layout Criteria

The current Project layout was determined in accordance with the same criteria that were described in Section 1.5.1 of the DEIS, which included wind resource assessment, setbacks from homes and other sensitive land uses, and environmental considerations to avoid sensitive resources (e.g., wetlands, cultural resources, etc.) to the extent practicable. In the few locations that were not previously included in the Project Area during preparation of the DEIS, equivalent studies and or analyses were performed. These additional studies are discussed in detail within the appropriate section of the SEIS, and attached as appendices, where applicable.

1.5.2 Roads and Civil Construction Work

Roads and civil construction work generally remains as described in the DEIS. Where Project layout changes have occurred, information about these changes are provided below.

1.5.2.1 Project Site Roads

Based on the current layout, the Project will include approximately 13 miles of access roads (10.3 miles for the proposed turbine sites and 2 miles for the alternate turbine sites). As described in the DEIS, existing farm lanes and woods roads will be used wherever practical to minimize new ground disturbance and vegetation clearing. The access routes have been redesigned in accordance with the revised turbine layout and size.

1.5.2.2 Road Design

Project access roads will be designed and constructed as described in the DEIS.

1.5.3 Turbine Tower Foundations

The larger turbines will each require approximately 660 cubic yards of concrete. This is approximately twice the amount indicated in Section 1.5.3 of the DEIS due to the larger turbine size currently proposed. Environmental impacts from taller turbines have been factored into the impact analyses presented in Section 2.0 of this SEIS. Otherwise, WTG foundations will be designed and constructed as described in Section 1.5.3 of the DEIS.

1.5.4 Wind Turbine Generators and Central Control System

The WTG currently proposed for this Project is the Gamesa G114-2.1 (or equivalent WTG). Information regarding the characteristics and general operation of this turbine is included in Appendix A. Each WTG consists of three major mechanical components: the tower, nacelle, and rotor. Assuming use of the Gamesa G114-2.1 turbine, the anticipated tower height for the Project, or “hub height” (height from foundation to the rotor hub), is approximately 93 meters (305 feet). The Gamesa G114-2.1 has a rotor diameter of 114 meters (374 feet), resulting in a total height of 150 meters (492 feet). Should the Gamesa G114-2.1 not be available at the time of procurement, the Applicant will use a WTG of similar specifications.

Wind turbine type certification and equipment selection remain as described in the DEIS.

1.5.4.1 Wind Turbine Basic Configuration

The description of wind turbine components provided in this section of the DEIS remains accurate.

1.5.5 Electrical Collection System Infrastructure

Based on the current layout, the Project will include a total of approximately 20.1 miles of collection lines (17.2 miles for the proposed turbine sites and 2.9 miles for the alternate turbine sites). All of these are currently anticipated to be installed underground, except in those limited instances (cumulatively totaling no more than 1 mile in distance) where installation of overhead collection lines would reduce environmental impacts and/or logistical difficulties (e.g., crossing of sensitive wetlands or steep ravines). The infrastructure and installation techniques remain as described in the DEIS.

1.5.6 Interconnection Substation Facilities

Section 1.5.6 of the DEIS described two alternate locations for the substation facilities. Based on feedback from the New York Independent System Operator (NYISO), the site adjacent to the existing Willis Substation has been selected. This site is located along Willis Road in the Town of Chateaugay. The description of the equipment and features to be included within the collection system station and POI switchyard remain as described in the DEIS.

1.5.7 Project Grounding System

The grounding system for the Project remains as described in the DEIS.

1.5.8 Meteorological Monitoring Station Towers

The current Project includes one permanent met tower compared to the four met towers described in the DEIS. The location of the proposed met tower is shown on Figure 2. The met tower will be self-supporting (unguyed) and 93 meters (305 feet) tall. Aside from the height increase (from 80 m to 93 m) necessary to collect meteorological data at the turbine hub height, met tower design remains as described in Section 1.5.8 of the DEIS.

1.5.9 Operations and Maintenance Facility

The O&M Facility for the Project remains as described in the DEIS.

1.6 PROJECT CONSTRUCTION

Project construction information and sequencing generally remain as presented in the DEIS. Project construction is anticipated to occur in a single phase that will begin as soon as possible in 2016 and be completed in 2017. Engineering evaluation and design have been initiated, including public road evaluations, geotechnical testing, civil design, foundation design, and electric system design (collection circuits and collector station/POI switchyard). Table 2 provides an updated preliminary construction schedule.

Table 2. Preliminary Construction Schedule

Task	Duration (Weeks)	Anticipated Start Date
Preliminary Activities		
Reserve Turbines	-	12/1/2015
Order Substation Transformer	-	7/1/2015
Fabricate Turbines	30	5/16/2016
Fabricate Substation Transformer	50	8/1/2015
Grading of Substation Areas/POI Switchyard	6	6/1/2016
Construction		
Estimated Mobilization Date	1	1/10/2016
Environmental and Safety Training	1	1/15/2016
Tree Clearing Operations	12	1/15/2016
Road Construction	15	6/1/2016
Substation and Switchyard Construction	24	6/1/2016
Foundation Construction	11	6/25/2016
Electrical Collection System Construction	23	6/1/2016
Wind Turbine Assembly and Erection	13	8/22/2016
Switchyard and Substation Energization and Commissioning	4	10/5/2016
Energization and Commissioning of Turbines	4	10/18/2016
Final Grading	6	10/18/2016
Projected Substantial Completion Date	-	11/18/2016
Restoration Activities	10	10/18/2016

Table 3 provides the assumptions regarding the area of proposed vegetation clearing and soil disturbance impacts during construction and operation of the Project. These impact assumptions are conservative for the purpose of evaluating potential environmental impacts. The actual areas of vegetation clearing and soil impacts are anticipated to be less than the assumptions presented herein, but the exact areas will not be determined more precisely until Project engineering is complete.

Table 3. Revised Impact Assumptions

Project Components	Typical Area of Vegetation Clearing	Area of Temporary Soil Disturbance	Area of Permanent Soil Disturbance
Wind Turbines and Workspaces	250' radius per turbine	250' radius per turbine	50' radius per turbine and 65' x 100' crane pad
Access Roads	100' wide per linear foot of new road	54' wide per linear foot of road	34' wide per linear foot of road ¹
	50' wide per linear foot (adjacent to existing road)	50' wide per linear foot (adjacent to existing road)	50' wide per linear foot (adjacent to existing road)

Buried Electrical Interconnects	75' wide per linear foot of cable	35' wide per linear foot of cable	none
Overhead Electrical Interconnects	150' wide per linear foot of cable	12 feet wide temporary road within cleared area for construction access	Limited to pole footprint diameter
Permanent Meteorological Towers	1 acre per tower	1 acre per tower	0.1 acre per tower
Laydown Yard	10 acres	10 acres	none
Project Substation	2 acres	2 acres	1.25

¹In agricultural lands, permanent access roads will be 16 feet wide with a permanent disturbance width of 22 feet per linear foot, as per the Agricultural Protection Measures outlined in Appendix B.

Several of the impact assumptions differ slightly from those presented in Section 1.6 of the DEIS. For example, the crane pads were assumed to be 60 feet by 100 feet in the DEIS, but are assumed to be 65 feet by 100 feet for this revised SEIS. This minor change will accommodate cranes anticipated to be used during maintenance activities. The 12-foot wide temporary road associated with overhead electrical interconnect was not included in disturbance assumptions of the DEIS, however, including this disturbance provides a more accurate estimate of anticipated impacts. The crane paths that were proposed in the DEIS that would walk cranes between turbines sites where access roads were not constructed are no longer proposed. For the revised SEIS Project, turbines will be walked along access roads to eliminate additional impacts from crane paths. An on-site O&M building and a point of interconnect/switchyard are no longer proposed for this Project, so these impacts are not included in Table 3.

Section 2.0 of this SEIS presents detailed resource-specific estimates of Project-related disturbances, calculated based on the current layout and the impact assumptions presented above in Table 3.

1.7 OPERATIONS AND MAINTENANCE

The Gamesa G114-2.1 WTG begins to generate electricity at wind speeds of approximately 2.5 meters per second (m/s) (5.6 mph) and has a normal operational speed of 7.8 to 14.8 revolutions per minute (RPM). The Project is expected to be generating power about 80% of the time and have an average NCF of approximately 31-32%. Total net electricity delivered to the existing New York power grid is expected to be approximately 211,002 to 217,809 megawatt hours (MWh) (i.e., 37 turbines x 2.1 MW x 24 hours/day x 365 days x 31-32% NCF). This is enough electricity to meet the average annual consumption of approximately 30,000 households, based on the average annual electric consumption of 7.2 MWh for New York State residences (EIA, 2015a). Aside from these differences based on improvements in WTG technology, Project operations and maintenance remain as described in the DEIS.

1.8 DECOMMISSIONING

Decommissioning and site restoration activities for the Project will be as described in the DEIS. A formal Decommissioning Plan will be submitted with the updated Wind Energy Permit Application. The anticipated costs of decommissioning have been updated due to the amount of time that has passed since the DEIS was published. As summarized in DEIS Table 1.8-1, the estimated cost of decommissioning was estimated to be approximately \$54,000 per turbine in 2007 dollars. Table 4 presents the cost estimate for decommissioning each wind turbine in 2015 dollars, taking into account the current scrap value of the steel and generator components.

Table 4. Estimated Cost of Decommissioning per Wind Turbine

Removal of Tower	270 man hours x \$97.55/hour Cranes (2), 5 days x \$6,885.58/day	\$26,338.5 \$34,427.90
Removal of Concrete to 48 inches below grade	150 man hours x \$97.55/hour Equipment, 3 days x \$2,868.99/day	\$14,632.5 \$8,606.97
Removal of Collection System	100 man hours x \$97.55/hour Equipment, 2 days x \$4,016.59/day	\$9,755 \$8,033.18
Seeding and Re-vegetation (Assumes 2 acres/turbine, including collection system)	3 man hours x \$97.55/hour	\$292.65
Total Removal Costs Per Turbine		\$102,136.7
Scrap Value of Tower Steel	200 tons x \$172.14/ton	\$34,428
Scrap Value of Generator Components	Per turbine	\$5,737.98
Total Salvage Value Per Turbine		\$40,165.88
Estimated Per Turbine Net Cost of Decommissioning (Total Removal Cost Less Estimated Salvage Value)		\$61,970.82

The decommissioning costs presented herein (and in the DEIS) were determined using a variety of credible industry sources, the *Blue Book of Building and Construction*, current market prices, and current dollar value. However, because the wind turbines are likely to have a salvage value in excess of their pure scrap value, the actual cost of decommissioning is likely to be lower than this estimate. To comply with local laws in the Towns of Chateaugay (Local Law No. 7 of 2006) and Bellmont (Local Law No. 2 of 2006), the costs associated with decommissioning and restoration will be re-estimated by an independent licensed engineer every three years and kept current indexed to inflation.

1.9 PROJECT COST AND FUNDING

The current estimated capital cost to construct the Project ranges from \$155 to \$160 million dollars. The Applicant has committed to investing millions of dollars of at risk capital to option the land and associated wind rights of area landowners, as well as conduct initial Project feasibility studies. The Project will receive no public funding from the federal, state, or local governments during development or construction. The current federal production tax credit program expired on December 31, 2014. Jericho Rise is qualified for this production tax credit (the PTC) via the safe

harbor rule, because it purchased many of the major project components, and by demonstrating continuous efforts toward construction. The project will receive tax credits worth \$23 for each MWh it produces and delivers to the electrical grid for the first 10 years of its operation.

New York State’s RPS creates a market for the green energy attributes of wind power that is separate from the market value of the underlying electricity. These attributes, referred to as renewable energy credits (RECs), are generated according to the number of MWh of power the Project produces. Jericho Rise was awarded a contract for its RECs from the New York State Energy Research and Development Authority (NYSERDA) in the State’s 9th Main Tier Solicitation. For the 164 MW of total renewables that were awarded contracts, the weighted average price of the all the RECs awarded in this contract was \$22.96/REC.

Jericho Rise will monetize the electricity it produces by selling it into the wholesale power market operated by the New York Independent System Operator (NYISO). As an intermittent generator, the Project is also qualified to participate in the Capacity and Ancillary service markets for a portion of its nameplate capacity. For additional price certainty, the Applicant is seeking bilateral contracts for the electricity it produces with offtakers within the State of New York.

1.10 PERMITS AND APPROVALS REQUIRED

The permits and approvals described in Section 1.10 of the DEIS will still be required for the current Project. In addition, the Project also anticipates requiring approvals from the Towns of Bellmont and Chateaugay to allow for the construction of wind turbines taller than 400 feet in total height. The Applicant has applied for waivers pursuant to Article V of the Town of Chateaugay Wind Energy Facilities Local Law No. 7 of 2006 and Article V of the Town of Bellmont Wind Energy Facilities Law No. 2 of 2006. These waivers are further discusses in Section 2.13 of this SEIS. The permits and approvals that are expected to be required are listed below in Table 5.

Table 5. Permits and Approvals for the Jericho Rise Wind Farm

Agency	SEQRA Agency Status	Description of Permit or Approval Required
Towns		
Town of Bellmont Town Board	Co-Lead	Wind Energy Permit and Waivers Approval SEQRA Lead Agency SEQRA Findings Approval of Town Road Agreements Mitigation Host Agreement

Agency	SEQRA Agency Status	Description of Permit or Approval Required
Town of Chateaugay Town Board	Co-Lead	Wind Energy Permit and Waivers Approval SEQRA Lead Agency SEQRA Findings Approval of Town Road Agreements Mitigation Host Agreement
Franklin County		
Highway Department	Involved	Highway Work Permits SEQRA Findings
County of Franklin Industrial Development Agency (IDA)	Involved	Potential Funding through payment-in-lieu of taxes (PILOT) Agreement SEQRA Findings 239-m Review
New York State		
Department of Environmental Conservation (NYSDEC)	Involved	Article 24 Permit for Disturbance to State Jurisdictional Wetlands Article 15 Permit for Disturbance of Protected Streams SPDES General Permit Section 401 Water Quality Certification SEQRA Findings
Department of Transportation (NYSDOT)	Involved	Special Use Permit for Oversize/Overweight Vehicles Highway Work Permit SEQRA Findings
New York State Department of Agriculture and Markets	Interested	Consultation
Public Service Commission (PSC)	Interested	New York Public Service Law § 68 Certificate SEQRA Findings
New York State Energy Research and Development Authority (NYSERDA)	Interested	Funding through Renewable Portfolio Standard Auction
Office of Parks, Recreation, and Historical Preservation (NYSOPRHP)	Interested	Consultation pursuant to NY, Parks, Recreation and Historic Restoration Law (PRHPL) § 14.09 and § 106 of the National Historic Preservation Act (NHPA)
Federal		
U.S. Army Corps of Engineers	N/A	Section 404 or Nationwide Permit for Placement of Fill in Federal Jurisdictional Wetlands/Waters of the U.S. NEPA Compliance Compliance with Section 106 of the NHPA Compliance with Section 7 of the Endangered Species Act
Federal Aviation Administration	N/A	Lighting Plan and Clearances for Potential Aviation Hazard
U.S. Fish and Wildlife Service	N/A	Consultation Pursuant to Section 7 of the Endangered Species Act, Associated with the Aforementioned Section 404 Permit

1.11 PUBLIC AND AGENCY INVOLVEMENT

The description of public and agency involvement provided in Section 1.11 of the DEIS remains accurate. Additional agency consultation that has occurred since the publication of the DEIS is included in Appendix C and/or included within the resource-specific assessment reports that are appended to this SEIS. Public and agency comments on the DEIS were reviewed by the Lead Agency and the Applicant, and various follow-up investigations were conducted to address those comments as noted where applicable throughout the SEIS. The filing of this SEIS will result in another public comment period. The combined consultation record from the DEIS and SEIS will be provided in the Project's FEIS, along with responses addressing those comments still pertinent to the Project based on changes since the SEIS.

1.12 SEQRA PROCESS

The SEQRA process for the Project is described in the DEIS. That discussion is repeated herein to clarify the sequence of the SEIS within the overall SEQRA review for the Project, and to highlight the subsequent steps necessary to conclude the SEQRA review.

The SEQRA process for the Jericho Rise Wind Farm was initiated in June 2007 with the submission of a Wind Energy Permit Application to the Chateaugay and Bellmont Town Boards. The Wind Energy Permit Application was prepared in accordance with the Wind Energy Facilities Laws of the Towns of Chateaugay (Local Law No. 7 of 2006) and Bellmont (Local Law No. 2 of 2006), and included a Full Environmental Assessment Form (EAF). The EAF was circulated to potential interested and involved agencies with a notification that the Towns intended to serve as Co-Lead Agencies for the SEQRA review. No objections were received and the Towns assumed the role of Co-Lead Agencies. As Co-Lead Agencies, the Town Boards issued a positive declaration requiring preparation of a DEIS in September 2007 and accepted a DEIS Scope in October 2007.

The Applicant prepared a DEIS, which was accepted as complete by the Lead Agency in February 2008. The public comment period for the DEIS (typically, 30 days) was extended through April 2008 and included two public hearings, one each in March and April 2008.

As a result of the increase in turbine height, changes in Project layout, and the time that has passed since preparation of the DEIS, the Applicant has prepared this SEIS. Following the acceptance of the SEIS by the Co-Lead Agencies, SEQRA requires a 30-day public comment period to provide the public and interested/involved agencies an opportunity to comment on the SEIS. This SEIS, along with a copy of the public notice, will be distributed for review and comment to the public and circulated to the agencies and parties that received copies of the DEIS. It will also be

posted on the website (www.edprwindfarms.com). In addition, the Lead Agency will schedule a public hearing, which will likely be held in conjunction with the application for wind energy permits and any waivers (for example, to address the height of the turbines).

Responses to comments on the DEIS and SEIS will be provided in the Project's FEIS. This SEIS largely addresses and provides much of the information requested by comments received on the DEIS, and will be referenced in the FEIS comment responses as appropriate. Comments received in the DEIS/SEIS process that are no longer applicable to the Project will be noted.

The remaining SEQRA process for the Project will include the following actions and anticipated time frames:

- SEIS accepted by Co-Lead Agencies;
- File notice of completion of SEIS and notice of public comment period;
- Applicant will provide updated Wind Energy Permit Application that addresses the changes in the Project since the original 2007 application;
- 30-day public comment period;
- Public hearing on SEIS, Wind Energy Permits, and Waivers;
- Respond to comments received on the DEIS and SEIS and prepare FEIS (as described above);
- FEIS accepted by Co-Lead Agencies;
- File notice of completion of FEIS;
- 10-day public consideration period;
- Co-Lead Agencies issue Findings Statement, completing the SEQRA process;
- Towns' Action on Pending Applications and Waivers; and
- Involved agencies issue Findings Statements and decisions on pending applications.

1.12.1 Agency and Public Review

The SEIS will be made available for agency and public review in a manner similar to that used for the DEIS, and in accordance with the process established by the Co-Lead Agencies. The Applicant has also consulted with federal and state agencies and local municipalities in support of separate permitting processes required by the New York State Department of Environmental Conservation (NYSDEC), New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), the U.S. Army Corps of Engineers (USACE), and U.S. Fish and Wildlife Services (USFWS), as described in the resource-specific assessments of potential environmental impacts in Section 2 of the DEIS and this SEIS.