

Amended Application of Ball Hill Wind LLC for a Wind Overlay District, a Special Use Permit for Wind Energy Facilities and the Amendment of Villenova Local Law No. 1 of 2007 to increase the maximum height for WECS

Town of Villenova, Chautauqua County, NY

Table of Contents

Executive Summary

Section I Project Overview

1. Applicant Information
2. Property Owner Information
3. Property Identification of each Turbine
4. Project Description

Section II Site Plans

5. Plot Plan of Project
6. WECS Drawing
7. Landscaping Plan
8. Lighting Plan
9. Property Owners within 500 feet of the Proposed Wind Overlay District

Section III Project Information

10. Ball Hill Wind Energy Project Decommissioning Plan
11. Complaint Resolution
12. Construction Schedule and Description of Delivery Vehicles and Routes
13. Environmental Assessment Form (EAF)
14. Wind Measurement Tower Applications
15. WECS Specifications and Material Safety Data Sheet
16. Declaration of Environmental Significance
17. Draft Environmental Impact Statement (DEIS) Submittal Information
18. Tower Design Information
19. Ice and Blade Throw Analysis
20. Statement of Truth and Accuracy

Appendices

- Appendix A:** Vestas 126, 3.45 MW Series Wind Turbine Brochure
Appendix B: Memoranda of Lease
Appendix C: FAA Advisory Circular 70/7460-1 L, Obstruction Marking and Lighting
Appendix D: FAA Determinations of No Hazard to Air Navigation
Appendix E: Agricultural Data Statement
Appendix F: 2008 Environmental Assessment Form and 2015 Board Resolution
Appendix G: Material Safety Data Sheets
Appendix H: Ball Hill Wind Project, Final Visual Resource Assessment
Appendix I: Working Draft Emergency Response Plan
Appendix J: Sound Level Assessment Report, Ball Hill Wind Project
Appendix K: Real Estate Consulting Report of Influence of Wind Farms on Residential Real Estate Values, Proposed Ball Hill Wind Energy Project

Figure List

- Figure 1:** Project Facilities
Figure 2: Project Comparison, Application Layout (September 2016) and SDEIS Layout (January 2016)
Figure 3: Ball Hill Wind Project
Figure 4: Ball Hill Wind Project, Town of Villenova
Figure 5: Utilities, Ball Hill Wind Project, Town of Villenova
Figure 6: Vertical Drawing of Vestas V126 and Access Door
Figure 7: Ball Hill Construction Schedule
Figure 8: Potential Off-Site Haul Route Roadways to be Utilized During Construction
Figure 9: Potential Project Area Roadways to be Utilized During Construction
Figure 10: Representative Drawings for OS/OW Vehicles (5 pages)

Ball Hill Wind Energy Project

Executive Summary

Ball Hill Wind Energy, LLC (the "Applicant"), a commercial business unit of RES Group, Inc., proposes to develop, construct, own, operate and maintain an approximately 100.5-megawatt (MW) wind energy facility to be known as the "Ball Hill Wind Energy Project" or "Project" in portions of the towns of Villenova and Hanover in Chautauqua County, New York. The Ball Hill Wind Energy Project will produce electricity from wind, a renewable energy source. The proposed layout for the Project is shown in the attached Figure 1.

Pursuant to Villenova Local Law No. 1 of 2007 entitled "Wind Energy Facilities Law" (the "Wind Law"), the Applicant hereby submits an Amended Application for the creation of a Wind Overlay District, for the issuance of a Special Use Permit and an increase of the maximum height restriction contained in Section 690.09(A)(13) of the Wind Law from 420' to 495' to allow for the use of newer, more efficient turbine technology that was not previously available. Specifically, the Applicant seeks to amend the language of Section 690.09(A)(13) to read as follows:

13. The maximum Total Height of any WECS shall be 495'.

The Amended Application, if approved, would allow for the development, construction, operation, ownership and maintenance of the Ball Hill Wind Energy Project by the Applicant.

Project Description and Comparison to the SDEIS Layout

This Amended Application is the continuation of the development of the previously proposed Noble Ball Hill Windpark project utilizing the same project area, but will incorporate new turbine technology in a modified project layout described below.

In January 2016, as part of this continued development, the Applicant submitted a Supplemental Draft Environmental Impact Statement ("SDEIS") which included and analyzed a different layout and turbine technology than had been proposed in the 2008 Draft Environmental Impact Statement. In this portion of the Amended Application, we will describe the new layout of the Project and how it differs from the layout proposed in the SDEIS. Table 1 below specifically describes the changes for each WECS, the substation, switchyard and operations and maintenance building. In addition, this Amended Application provides information required by the Wind Law for the revised layout. Figure 2 shows the revised layout as compared to the layout included in the SDEIS.

Project Purpose and Layout

Generally, the Project calls for the construction of a number of wind energy conversion systems ("WECS") to generate \pm 100 MW of electricity within the Project Area.

- The Project Area for the layout proposed in the Amended Application is located in the same portions of the towns of Villenova and Hanover in Chautauqua County as was proposed in the SDEIS. See Figure 2.
- The revised project layout in the Amended Application consists of 29 WECS (23 of which will be located in Villenova and 6 of which will be located in Hanover). In the SDEIS, the Applicant proposed 36 turbines (28 of which were proposed in Villenova and eight (8) in Hanover). See Figure 2 which compares the layout included in the SDEIS and the current revised layout.
- There are no WECS to be located within 1200' feet of any residence in the revised layout included in the Amended Application.
- Each V126 turbines can generate 3.45MW of electricity.

- As a result of the reduction of the number of turbines and the revised locations, the Project reduced the need for ancillary facilities as described above, avoided and/or minimized related impacts while maintaining the +/-100 MW capacity for electrical production.
- the Applicant is proposing to install 29 Vestas V126 3.45MW wind energy conversion systems (the “V126 turbine”), the maximum height for which is ±492 feet (150 meters) when a rotor blade is at the top of its rotation.
- The V126 turbine is a three-bladed, upwind, horizontal-axis wind turbine with a rotor diameter of ±413 feet (126 meters). The blades will be approximately 79 feet (24 meters) from the ground at its nearest point. The nacelle is located at the top of each tower and contains the electrical generating equipment. The brochure for the Vestas 3.45 MW Series Wind Turbine is included as Appendix A.
- In the SDEIS, two similar WECS were presented and analyzed – the Vestas V-110 2.2 MW and the GE 2.3 MW. Both turbines were similarly sized to the V126 Turbine in that the maximum height of those WECS when the blade was in the vertical position was 492’ for the Vestas 110 and 499’ for the GE model respectively. As such, the height of the WECS proposed in the Amended Application will be the same or less than the WECS studied in the SDEIS.

Table 1 below shows the specific changes for each WECS and other wind energy facilities:

Access Roads, Electrical Collection Lines and Substation

Each WECS will have an access road constructed and the electricity generated will be collected and delivered via underground collection lines to a substation. While the routes for these access road and underground lines are slightly different due to the revisions to the layout, they serve the same purpose and will be constructed in the same manner as described in the SDEIS. See Figure 2.

- Access roads will be constructed to a width of 35’ during construction and restored when complete to a permanent width of 16’. The revised layout requires fewer miles of access roads to be built than was proposed in the SDEIS (14.9 miles in the SDEIS and 13.4 miles proposed in the Amended Application).
- The electrical collection system is currently designed to be entirely underground as required in the Wind Law § 690.09(A)(1). To the extent practicable, the collection lines will follow the access roads or run parallel to municipal rights-of way. The length of the collection lines was reduced from 21.3 miles in the SDEIS to 15.4 miles in the Amended Application.
- The electrical collection lines will bring the electricity generated by the WECS to a substation located near the middle of the Project Area in the town of Hanover. The SDEIS also called for a substation of similar size but was located ±850 southeast of the substation proposed in the Amended Application.

Transmission Line and Switchyard

The Amended Application includes a 5.7 mile overhead 115 kv transmission line to bring the electricity from the substation north to a switchyard where it will interconnect the Project with the existing 230 kv National Grid Dunkirk-Gardenville transmission line. See Figure 2.

- The design changed the voltage from 230 kv as proposed in the SDEIS to 115 kv as proposed in the Amended Application.
- The nature and extent of clearing will be substantially similar to that proposed in the SDEIS (though less clearing is required due to the final design of the Project layout). The lines would be placed on single wood poles or wood look-alike structures within a 120’ right-of-way (“ROW”) which generally would be cleared to a width of eighty feet (80’) with 20’ on both sides having selected tree removal as needed.
- The switchyard is proposed in the same location as in the SDEIS.
- As in the SDEIS, no poles will be placed in delineated wetlands.

Laydown Areas

The Amended Application also calls for several areas to be used as laydown areas for WECS components or construction trailers, parking and equipment. See Figure 2. These size, location and nature of these areas is the same as was shown in the SDEIS.

Operations and Maintenance Building

The Amended Application includes a building to be constructed and used during operation of the Project as an operations and maintenance building. This location of this building is shown on Figure 2 and is essentially the same as was analyzed in the SDEIS.

Table 1: Ball Hill Wind Project Summary of Changes from the SDEIS

Facility	Modifications and Rationale
Turbine 1	Turbine and access road eliminated to minimize slope impacts. Engineering constraints (steep slopes) made access difficult.
Turbine 2	Moved approximately 530 feet southeast; new access road location from Round Top Road. Moved from wooded area to open farm field. Eliminated difficult stream crossing and impacts associated with stream and woodlands - fragmentation.
Turbine 3	Moved approximately 450 feet southwest. Increased setback from adjacent landowner and houses to northeast.
Turbine 4	Moved approximately 230 feet southeast, to allow proper turbine spacing for the V126 turbine.
Turbine 5	Moved approximately 208 feet southeast. Increased spacing required for V126 turbine.
Turbine 6	Moved approximately 350 feet southwest. Moved to minimize steep slope impacts within turbine footprint.
Turbine 7	Moved approximately 220 feet northwest to address engineering constraints, and avoid wetland impacts.
Turbine 8	Remained in the same location as presented in the SDEIS.
Turbine 9	Moved access road to minimize agriculture impacts.
Turbine 11	Remained in the same location as presented in the SDEIS.
Turbine 12	Turbine and access road eliminated in response to engineering constraints, to increase Project energy production, and accommodate proper turbine spacing.
Turbine 13	Remained in the same location as presented in the SDEIS.
Turbine 14	Moved approximately 220 feet southwest, to allow proper turbine spacing for the V126 turbine.
Turbine 15	Moved approximately 500 feet east to increase Project energy production.
Turbine 16	Moved approximately 50 feet southeast, to allow proper turbine spacing for the V126 turbine.
Turbine 17	Moved approximately 580 feet northeast, to minimize wetland impacts. Road moved to minimize wetland impacts as well.
Turbine 18	Minor road shifts to minimize wetland impacts and impacts to agricultural lands.
Turbine 19	Moved approximately 350 feet north, for proper turbine spacing for the V126 turbine.

Table 1: Ball Hill Wind Project Summary of Changes from the SDEIS

Facility	Modifications and Rationale
Turbine 20	Moved approximately 820 feet northeast, to allow proper turbine spacing for the V126 turbine, and to comply with setbacks in Villenova’s Wind Law.
Turbine 21	Moved approximately 200 feet southwest, in response to engineering constraints, to avoid steep slopes and impacts, and minimize tree clearing.
Turbine 23	Moved approximately 230 feet east, for wetland avoidance.
Turbine 25	Turbine and access road eliminated to avoid wetland impacts, and minimize tree clearing.
Turbine 26	Turbine and access road eliminated to avoid wetland impacts, and minimize tree clearing.
Turbine 27	Moved approximately 1,100-feet northeast to avoid wetland impacts, and minimize tree clearing
Turbine 28	Moved approximately 220 feet west, to avoid wetland impacts and gas pipeline/wells.
Turbine 29	Turbine removed and access road eliminated to allow for proper turbine spacing for the V126 turbine, to minimize tree clearing, and avoid wetlands impacts.
Turbine 30	Moved approximately 90 feet southwest. To minimize wetland impacts, and respond to engineering constraints.
Turbine 31	Remained in the same location as presented in the SDEIS.
Turbine 32	Turbine and access road eliminated, for proper turbine spacing.
Turbine 33	No change.
Turbine 34	Moved approximately 430 feet southeast, to increase setbacks from adjacent parcel.
Turbine 35	Moved approximately 309 feet southwest, to avoid wetland impacts.
Turbine 36	Moved approximately 500 feet southeast, for proper turbine spacing for the V126 turbine. Associated access road and collection line moved accordingly.
Turbine 37	Moved approximately 1,200-feet northwest for proper turbine spacing. Associated access road and collection lines moved accordingly.
Turbine 38	Turbine eliminated, for proper turbine spacing, for the V126 turbine and to avoid wetland impacts.
Southern Substation	Moved approximately 850 feet northwest, to minimize tree clearing and increase setback from residence.
Northern Substation/Switchyard	After extensive assessment of potential alternative locations, the original proposed location of Northern Substation was retained as optimal.
O & M Building	Location of the O&M Building will be finalized to avoid and/or minimize wetland impacts.

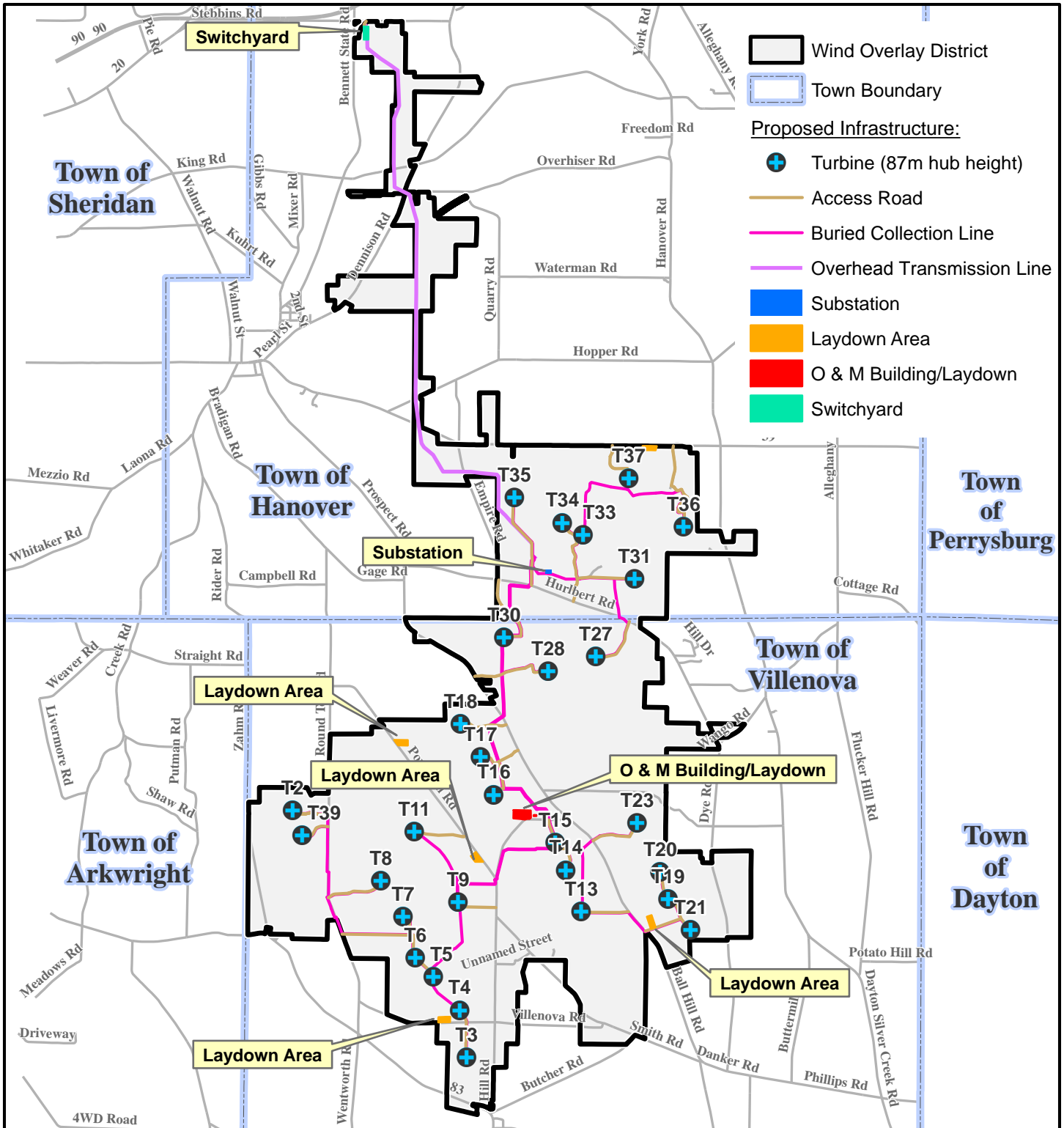
Project Timeline

In 2008, the Town of Villenova Town Board (“Town Board”) as Lead Agency pursuant to the State Environmental Quality Review Act (ECL Article 8 and its implementing regulations at 6 NYCRR Part 617) (collectively, "SEQRA") received, reviewed and accepted as complete (1) an application for the creation of a wind overlay district and special use permits and (2) a Draft Environmental Impact Statement ("DEIS"). The Town Board opened a 45 day comment period and held a public hearing on the application and DEIS.

In October, 2015, the Town Board resolved to allow continued development of the Project by Ball Hill Wind Energy, LLC which was recognized by the Town Board as the Applicant. Since the Applicant was proposing to operate a number of WECS which were different in type, size and location that was previously reviewed, the Town Board ordered the preparation of the SDEIS referenced above. The Town Board required the Applicant to address a range of impacts related to the implementation of new WECS technology, the modification of the prior project layout and the passage of time. On January 18, 2016, the Applicant submitted the SDEIS to the Town Board, which was reviewed by the Town’s consultants and accepted as complete for purposes of commencing public review.

The Applicant presented the SDEIS at a Public Hearing in the Town of Villenova on March 2, 2016. During the 45 day public comment period comments from the NYS Public Service Commission (“NYSPSC”), NYS Department of Environmental Conservation (“NYSDEC”), and members of the public were received.

After consideration of comments received on the SDEIS and in the course of optimizing Project design to avoid and/or minimize impacts, including impacts to wetlands, the Project was modified as set forth in this Amended Application. All impact studies associated with this revised design have been updated and have been submitted herewith or will be included in the Final Environmental Impact Study (FEIS) to be submitted to the Board consistent with Wind Law § 690.09(A)(17).



Ball Hill Wind Energy Project
Figure 1: Project Facilities
Chautauqua County, New York



Renewable Energy Systems



11101 W. 120th Ave., Suite 400 Broomfield, CO, 80021
 Phone: (303) 429-4200 Fax: (303) 429-4299

COORDINATE SYSTEM: NY West Zone, NAD83
 LAYOUT NUMBER: DRAWING NO.: 23105D6922-01
 DRAWN BY: AP DATE: 26/08/2016

This drawing is the property of RES America Developments Inc. and no reproduction may be made in whole or in part without permission.

Section I — Project Overview

1. Applicant Information

Ball Hill Wind Energy, LLC.
1101 W. 120th Ave., Suite 400
Broomfield, CO 80021
(303) 439-4200

Daniel P. Boyd, Senior Director, Project Development,
Renewable Energy Systems, Americas
455 Boston Post Road, Suite 206
Old Saybrook, CT 06475
(860) 661-3818

RES Experience and Qualifications

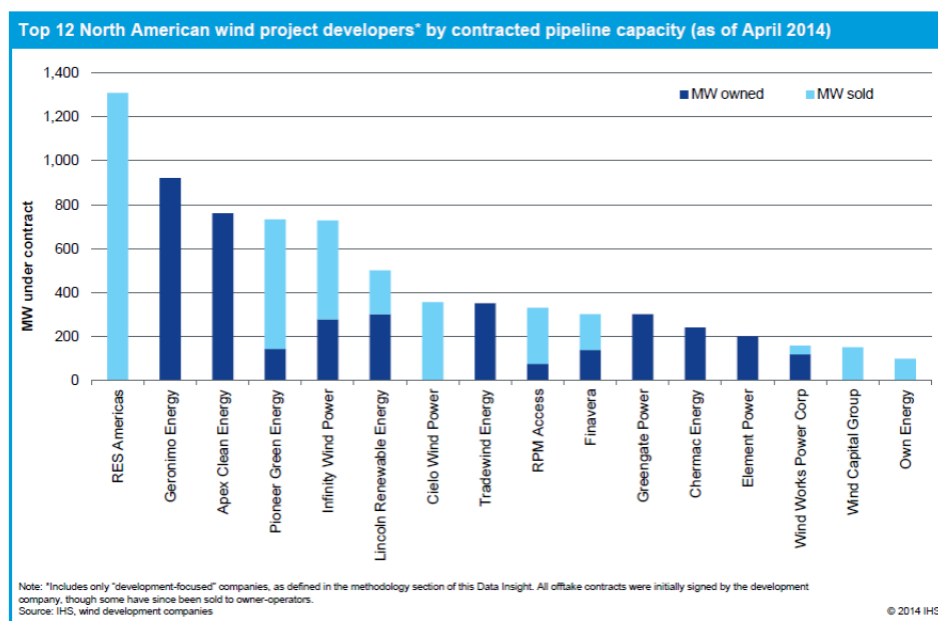
Project Development Experience

The RES Development Team has extensive experience developing utility scale renewable energy projects in the US, including the northeast (See information below). RES has extensive knowledge and experience in the integral services required to develop utility-scale wind, solar, and energy storage projects. The RES development team has developed over 3,300 MW of renewable energy and energy storage projects across North America.

Top North American Developer

RES is proud to have been ranked the top development company in North America by IHS Inc., an industry-standard information and analytics organization. In 2014 RES developed and contracted close to 1,300 MW of renewable energy projects.

Developer ranking by capacity contracted



Below is a table showcasing the complete RES portfolio of North American wind, solar, energy storage, and transmission line projects developed since 2010 and constructed or under construction.

Table 2: RES Americas Developed and/or Constructed Renewable Energy Projects since 2010								
Projects	MW	EPC	Dev	BOP BOS	Technology	Owner	Year	State/ Country
Flat Water Wind	60			X	GE	Gestamp and Banco Santander, SA	2010	NE and KS
Dunlap Wind	111			X	GE SLE	PacifiCorp	2010	WY
SNEEC Wind	4			X	REpower MN92	Technocentre eolien Gaspesie	2010	Canada
Hatchet Ridge Wind	101		X	X	Siemens	Pattern Energy	2010	CA
Talbot Wind	99	X	X		Siemens	Enbridge	2010	Canada
Crossroads Wind	227		X	X	Siemens	OG&E	2011	OK
Greenwich Wind	99	X	X		Siemens	Enbridge	2011	Canada
Webberville Solar	30			X	Trina Solar	SunEdison	2011	TX
Blue Canyon VI Wind	99			X	Vestas	Horizon	2011	OK
Cedar Point Wind	250	X	X		Vestas V90	Enbridge	2011	CO
Gaines Cavern Wind	2			X	Gamesa	TX Dispatchable Wind 1	2012	TX
NREL - Gamesa	2			X	Gamesa G97 Class IIIA	NREL	2012	CO
Mehoopany Wind	140			X	GE	BP Wind Energy	2012	PA
Harbor Wind	9			X	Guodian United Pwr	Revolution Energy	2012	TX
Rutley Solar (BOS)	10			X	MEMC/SunEdison	SunEdison	2012	Canada
Twin Ridges Wind	140			X	REpower MM 92	Everpower	2012	PA
Lower Snake River Wind	343		X	X	Siemens	Puget Sound Energy	2012	WA
Wildcat Wind	27			X	Suzlon S97	Exelon	2012	NM
Brooke-Alvinston Wind	10			X	Samsung	One World Energy	2012	Canada
Halkirk Wind 1	150			X	Vestas V90	Capital Power	2012	Canada
Buffalo Dunes Wind	250			X	GE	Tradewind	2013	KS
Norfolk Solar	10			X	SunEdison	SunEdison	2013	Canada
MATL Transmission (214 miles OHL)						Enbridge	2013	US & Canada
Alamo 1 Solar	41			X	Yingli	OCI	2013	TX
South Kent Wind	270			X	Siemens	SRE SKW EPC L.P.	2014	Canada

Table 2: RES Americas Developed and/or Constructed Renewable Energy Projects since 2010

Projects	MW	EPC	Dev	BOP		Technology	Owner	Year	State/ Country
				BOS					
Demorestville Solar	10			X		Canadian Solar	Canadian Solar	2014	Canada
Taylor Kidd Solar	10			X		Canadian Solar	Canadian Solar	2014	Canada
Newboro 1 Solar	10			X		SunEdison	SunEdison	2014	Canada
Newboro 4 Solar	10			X		SunEdison	SunEdison	2014	Canada
Mighty Solar	10			X		Canadian Solar	Canadian Solar	2014	Canada
Battery Utility of Ohio Energy Storage	4		X	X		Lithium Iron Phosphate	RES Americas	2014	OH
Amphora Ontario Energy Storage	4		X	X		Lithium Iron Phosphate	RES Americas	2014	Canada
Origin Wind	150		X	X		Vestas	Enel Green Power	2014	OK
Tucannon River Wind	267		X	X		Siemens	PGE	2014	WA
Keechi Wind	110		X	X		Vestas	Enbridge	2015	TX
GoldLight Solar	10			X		Canadian Solar	Canadian Solar	2015	Canada
Longhorn Wind	200		X	X		Vestas	EDF	2015	TX
Pleasant Valley Wind*	200		X	X		Vestas	Xcel Energy	2015	MN
Border Winds*	150		X	X		Vestas	Xcel Energy	2015	ND
Glacier Battery Storage Project*	2	X				Lithium ion	Puget Sound Energy	2015	WA
Goodwell Wind*	200			X		Vestas V100 and V110	Enel Green Power	2015	OK
Jake Energy Storage	19.8	X				Lithium ion	RES Americas	2015	IL
Elwood Energy Storage Center	19.8	X				Lithium ion	RES Americas	2015	IL
Grand Valley 3 Wind*	39.7			X		Siemens	Grand Valley 2 Limited Partnership	2015	Canada
Little Elk Wind*	74			X		Vestas V110	Enel Green Power	2015	OK
Willey Battery Storage Center*	6			X		Lithium Ion (Toshiba)		2015	OH
McHenry Battery Storage*	19.8	X				Lithium Iron Phosphate	Puget Sound Energy	2016	IL
Arbuckle Mountain (Rose Rock) Wind*	100			X		Vestas V110	Arbuckle Mountain Wind Farm LLC	2016	OK
Comanche Solar*	120			X		Trina	SunEdison	2016	CO

* Under Construction

RES offers a robust and wide range of engineering, construction, and management services. To deliver these services, RES deploys proven field teams with an extensive background in successfully completing complex projects in diverse regions under the most challenging geophysical and climatological conditions. The ability to deliver such projects on time and within budget is a core strength of the company.

RES in North America has utilized these capabilities to create a portfolio of utility-scale wind, solar, energy storage, and transmission line projects that exceeds 8,000 MW, includes over 80 projects, and over 650 miles of collection and transmission lines. The company's efforts are responsible for approximately 10% of the operational output of wind farms in the United States.

System Design Experience

RES Integrated Services

RES and affiliates have dedicated professionals that offer in-house expertise ensuring our projects are engineered for maximum efficiency, transition smoothly from one phase to the next, and are completed on time and within budget. We specialize in the following services.

Development Services

We offer a fully integrated set of development capabilities to ensure the success of any wind, solar, energy storage, or transmission project from greenfield development to operations. Our in-house expertise spans resource analysis, assistance with all aspects of land acquisition/permitting, site design, engineering, procurement, and construction.

Engineering Services

RES projects are engineered and constructed to last. Our experienced civil, electrical, and mechanical engineering teams offer the benefits of comprehensive expertise. Close coordination across teams allows us to work on engineering and construction concurrently so projects are up and running quickly and function smoothly. Our engineering capabilities include foundation design, geotechnical engineering, civil work, and electrical collection and grounding system design.

Construction Services

RES is expert in renewable energy, energy storage, and transmission line construction. Our in-house resources enable us to cost-effectively manage all aspects of a project from establishing a budget and schedule to final testing and commissioning. We also self-perform several processes including civil works, medium voltage (MV) collector system construction, wind turbine erection and solar pv facility installation. RES has constructed 74 renewable energy projects.

Operations and Maintenance Services

RES operations and maintenance (O&M) services use fleet-wide performance monitoring as well as central engineering and design teams to maximize availability, minimize lost production, and ensure safety and environmental compliance.

RES and affiliates operate in the renewable energy market, primarily in North America. Our staff collaborates to manage all aspects of development, construction, and maintenance of utility-scale wind, solar, energy storage, and transmission line projects. RES also manages engagements with utilities, municipalities, and landowners, as required.

The project map below includes a complete list of RES technology projects and locations.
RES Project Map

Washington—1,651.8 MW

- Nine Canyon I—48
- Nine Canyon II—16
- Nine Canyon III—32
- Hopkins Ridge I—149
- Hopkins Ridge II—7
- Marengo I—140
- Marengo II—71
- Wild Horse—229
- White Creek—205
- Harvest Wind—99
- Wild Horse II—44
- Lower Snake River—343
- Tucannon River—266.8
- *Glacier Battery—2*

California—208.2 MW

- Cameron Ridge—60
- Pacific Crest—47
- Hatchet Ridge—101.2

New Mexico—28.3 MW

- Llano Estacado—1
- Wildcat—27.3

Colorado—376 MW

- NREL—3.8
- Cedar Point—250.2
- NREL II—2
- *Comanche Solar—120*

Wyoming—380 MW

- Mountain Wind I—61
- Mountain Wind II—80
- High Plains—99
- McFadden Ridge I—29
- Dunlap—111

Montana—214 miles OHL

- MATL—214 miles

Nebraska—119 MW

- Ainsworth—59
- Flat Water—60

Kansas—349 MW

- Central Plains—99
- Buffalo Dunes—250

Oklahoma—850.5

- Crossroads—227.5
- Blue Canyon VI—99
- Origin—150
- Goodwell—200
- Little Elk—74
- *Arbuckle Mountain—100*

Texas—2,469 MW

- Woodward Mountain—160
- King Mountain—278
- Sweetwater II—92
- Sweetwater IV(b)—106
- Sweetwater V—81
- Whirlwind—60
- Lone Star—400
- Hackberry—166
- South Trent Mesa—101
- Buffalo Gap III—170
- Bull Creek—180
- Gulf Wind—283
- Webberville Solar—30
- Harbor Wind—9
- Gaines Cavern—2
- Alamo I Solar—41
- Keedi—110
- Longhorn—200

North Dakota—150 MW

- *Border Winds—150*

Minnesota—200 MW

- *Pleasant Valley—200*

Wisconsin—54 MW

- *Butler Ridge—54*

Ohio—10 MW

- *Ohio Battery—4 (storage)*
- *Willey—6 (storage)*

Pennsylvania—381.2 MW

- Armenia Mountain—101
- Mehoopany—140.8
- Twin Ridges—139.4

Illinois—59.4 MW

- *Jake (storage)—19.8*
- *Elwood (storage)—19.8*
- *Energy Storage Project—19.8*

Canada—755.2 MW

- SNEEC—4.1
- Talbot—99
- Greenwich—99
- Halkirk I—149.4
- Rutley Solar—10
- Brooke-Alvinston—10
- Norfolk Solar—10
- South Kent—270
- Demorestville Solar—10
- Amphora—4 (storage)
- Mighty Solar—10
- Taylor Kidd Solar—10
- Newboro 1 Solar—10
- Newboro 4 Solar—10
- GoldLight Solar—10
- *Grand Valley 3—39.7*



Jamaica—21 MW

- Wigton—21



Projects under Construction are *italicized*

Project Financing Experience

RES proposes to finance the Project with a combination of debt, tax equity, and sponsor equity capital, in order to minimize total capital costs. As with all its previous projects, RES has the means to internally fund 100% of all costs to achieve a financial closing/construction notice-to-proceed date, and will not seek third party financing during the development stage. However, in order to fully utilize available tax incentives we plan to seek third-party debt and equity funding for project construction and operations, and the pricing presented herein assumes the participation of such third-party finance participation at reasonable market rates.

RES has demonstrated over the years that it has the financial resources to complete 5 GW of successful projects through a combination of internal and external financing (see Table 3).

Table 3: RES Americas Contracts with Utilities and C&Is			
Company	Project	MW	RES Role
Southern California Edison	Cameron Ridge	60	Developer and BOP Constructor
Public Service Company of Colorado (PSCo), an Xcel Energy	Cedar Point	250.2	Developer & EPC Contractor
Hydro One	Greenwich	99	Developer & EPC Contractor
Austin Energy	Hackberry	166	Developer, EPC Contractor & Owner
Reliant Energy, Austin Energy & TNMP	King Mountain	278	Developer & EPC Contractor
TXU Energy	Lone Star - Mesquite	200	Developer and BOP Constructor
TXU Energy	Lone Star - Post Oak	200	Developer and BOP Constructor
Hydro One	Talbot	99	Developer & EPC Contractor
Austin Energy	Whirlwind	60	Developer, EPC Contractor & Owner
TXU Energy	Woodward Mountain	160	Developer and BOP Constructor
Arkansas Electric Co-op	Origin Wind	150	Developer, BOP Contractor
Wolverine Power Cooperative	Deerfield Wind	149	Developer
Microsoft	Keechi Wind	110	Developer, EPC Contractor

RES Americas has extensive experience developing and constructing projects which utilize tax and cash equity funding structures. RES developed and presently owns and operates multiple projects which utilize this type of financing structure. The following list identifies examples:

Hackberry Wind Farm in Albany, Texas is comprised of 166 MW of wind power. Hackberry Wind Farm was constructed January through December of 2008. The project is structured as a levered tax equity structure, whereby there are project finance lenders, tax equity, and cash equity (RES).

Whirlwind Energy Center in Floydada, Texas is comprised of 60 MW of wind power. Whirlwind Energy Center was constructed March through December of 2007. The project is structured as a levered tax equity structure, whereby there are project finance lenders, tax equity, and cash equity (RES).

Webberville Solar, Webberville, TX is a 30 MWAC Photovoltaic project. Webberville Solar was constructed May 2011 to December 2011. Project was constructed under an EPC contract with the project owner. RES is also providing five years of O&M services for the project. As the EPC contractor, RES' reputation and creditworthiness allowed the project owner to secure financing on favorable terms.

Power Purchase Agreement Experience

A large percentage of RES' more than 3,300 MWs of self-developed projects are operating under power purchase agreements (PPAs). Customers under these PPAs include conventional utilities and power cooperatives, as well as commercial and industrial counterparties.

As shown by the table of projects above, RES has been successful in developing, financing, and constructing many projects. RES has approximately \$550 million in net assets and over \$1 billion in total assets. These resources coupled with RES' project finance experience provide the security to ensure the Project has access to the resources required to assure successful financing, construction, and operation of the Project.

Operations and Maintenance Experience

RES Americas' operations team provides asset management and O&M services for utility scale solar, wind, and energy storage facilities. Operations are managed by an on-site O&M team and an off-site management team at RES' headquarters in Broomfield, CO. RES' in-house management team develops performance tools, databases, and software capabilities to efficiently manage the site.

These resources help RES proactively plan for scheduled and unscheduled maintenance. When unexpected events arise, the three teams work together towards a quick resolution. The daily, weekly, and monthly reporting infrastructure is well developed and allows for consistent insight into site operations.

RES' management focuses on improving key metrics such as time and energy availability resulting in a measurable increase in site production.

Goals of the O&M team include:

- Maximize facility availability
- Minimize lost production
- Operate the project without causing harm or injury to anyone and in full compliance with all relevant health and safety regulations
- Operate the solar farm in compliance with environmental standards
- Manage construction, commissioning, interconnect, and COD process
- Manage operating costs within the approved budget while ensuring maximum value for the money

RES has 225 total months (21.25 years) of O&M experience (see Table 4):

Table 4: Operations & Maintenance Experience			
Plant	MW	Type	Months of Operation
Webberville Solar	30	PV	46
Cedar Point	250	Wind	26
Hackberry	166	Wind	72
Whirlwind	60	Wind	84
Greenwich	99	Wind	12
Talbot*	99	Wind	15
Total	704		255
<i>*RES no longer operates Talbot</i>			

RES has maintained and exceeded contractual expectations reaching availability percentages above 99%. RES has developed a robust supervisory control and data acquisition (SCADA) communications and control platform which has been used at our renewable energy projects in the U.S., Canada, and Europe. It is currently deployed on wind, solar, and energy storage projects. The RES SCADA platform allows us to monitor remotely all aspects of system performance and troubleshoot O&M issues.

2. Property Owner Information

The lease agreements between the Applicant and each landowner provide the permission necessary for the Applicant to, among other things, apply for the necessary permits and approvals for the Ball Hill Wind Energy Project. Copies of all Memoranda of Lease (“MOLs”) between the Applicant and landowners relevant to the placement of WECS, access roads or other wind energy facilities or to allow for compliance with setback requirements are enclosed electronically as part of Appendix B. There are no WECS located within 1200’ of any residence in this Amended Application.

Table 5 includes the name and address of each landowner.

3. Property Identification of each Turbine

Table 6 identifies the property associated with each WECS.

4. Project Description

Please refer to the detailed description of the Project in the Executive Summary above.

Table 5: Property Owner Information

Tax ID	Property Owner	Mailing Address				Property Location		Status
		Street Address	City	State	Zip Code	Road	Town	
134.00-1-38	Roy Schneiderman	8160 Westphalinger Rd	East Amherst	NY	14051	Bradigan Rd	Villanova	MOL
134.00-1-40	Nadine McCarthy	17 Chestnut St	Forestville	NY	14062	Round Top Rd	Villanova	Negotiating
134.00-1-43	John and Chere Tunstall	9429 Pope Hill Rd	Forestville	NY	14062	Pope Hill Rd	Villanova	MOSA
134.00-1-45	John and Chere Tunstall	9429 Pope Hill Rd	Forestville	NY	14062	Pope Hill Rd	Villanova	MOSA
134.00-1-47	Elenor Hebner	9575 Pope Hill Road	Forestville	NY	14062	Pope Hill Rd	Villanova	MOL
134.00-1-48.2	Matthew H. Aldinger	PO Box 354	Forestville	NY	14062	Round Top Rd	Villanova	MOL
134.00-2-10	Michael & Sarah LaMonto	PO Box 411	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-11	Michael & Sarah LaMonto	PO Box 411	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-13	Frank Press Jr.	9355 Ball Hill Road	Forestville		14062	Prospect Rd	Villanova	MOL
	Florence O'Conner	4122 Sowles Rd, Apt	Hamburg Lake	NY	14075			
	Patricia Greiner	313 6427 Heltz Rd	View		14085			
134.00-2-16	Mark & Kathleen Greene	9716 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-17.1	Michael Gajewski	9658 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-17.2	Brian P. & Renee L. Press	9645 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-18	Harold & Linda Scott	9633 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-19	Harold & Linda Scott	9633 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-20	Randall Ortel	145 W. Sixth St.	Dunkirk	NY	14048	Prospect Rd	Villanova	MOL
	Gloria Sarver	9 Congress Dr	Rockford	IL	61109			
134.00-2-21.1	John & Chere Tunstall	9429 Pope Hill Rd	Forestville	NY	14062	Pope Hill Rd	Villanova	MOSA
134.00-2-22	Harold & Linda Scott	9633 Prospect Rd	Forestville	NY	14062	Pope Hill Rd	Villanova	MOL
134.00-2-23.3	Kristy Bly	2774 Middle Road	Dunkirk	NY	14048	Pope Hill Rd	Villanova	MOL
134.00-2-24	Michael Gajewski	9658 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-6	John & Frieda Swanson	9974 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
134.00-2-9	John & Frieda Swanson	9974 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
	Ball Hill Camp Corp.							
135.00-1-1	Attn: Harry Watkins	72 North Lane	Angola	NY	14006	Hurlbert Rd	Villanova	Negotiating
135.00-1-15.1	Harold & Linda Scott	9633 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
135.00-1-15.2	Harold & Linda Scott	9633 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL

Table 5: Property Owner Information

Tax ID	Property Owner	Mailing Address				Property Location		Status
		Street Address	City	State	Zip Code	Road	Town	
135.00-1-19	Randall Ortel	145 W. Sixth St.	Dunkirk	NY	14048	Prospect Rd	Villanova	MOL
	Gloria Sarver	9 Congress Dr	Rockford	IL	61109			
135.00-1-26	Wayne & Danisue Buelow	916 Bartlett Hill Rd	South Dayton	NY	14138	Bartlett Hill Rd	Villanova	MOL
135.00-1-3	Douglas & Barbara Bunker	775 Hurlbert Rd	Forestville	NY	14062	Route 87	Villanova	MOL
135.00-1-31	Wayne & Danisue Buelow	916 Bartlett Hill Rd	South Dayton	NY	14138	Bartlett Hill Rd	Villanova	MOL
135.00-1-32	Wayne & Danisue Buelow	916 Bartlett Hill Rd	South Dayton	NY	14138	Bartlett Hill Rd	Villanova	MOL
135.00-1-33	Wayne & Danisue Buelow	916 Bartlett Hill Rd	South Dayton	NY	14138	Bartlett Hill Rd	Villanova	MOL
135.00-1-4	John & Frieda Swanson	9974 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
135.00-1-6	Michael & Sarah LaMonto	PO Box 411	Forestville	NY	14062	Prospect Rd	Villanova	MOL
135.00-1-7	Frank Press Jr.	9355 Ball Hill Road	Forestville		14062	Prospect Rd	Villanova	MOL
	Florence O'Conner Patricia Greiner	4122 Sowles Rd, Apt 313 6427 Heltz Rd	Hamburg Lake View	NY	14075 14085			
135.00-1-8	Mark & Kathleen Greene	9716 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
135.00-1-9.1	Michael Gajewski	9658 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL
135.00-2-1	Douglas & Barbara Bunker	775 Hurlbert Rd	Forestville	NY	14062	Dye Rd	Villanova	MOL
135.00-2-10	King Timberlands LLC Attn Gary Lynn	1883 Lyndon Blvd	Falconer	NY	14733	Smith Rd	Villanova	MOL
135.00-2-14	Nelson & Betty Crowell & Steven & Kristan Crowell	9684 Dye Road	Forestville	NY	14062	Dye Rd	Villanova	MOL
151.00-1-3	Lorrie & Richard Pchelka	PO Box 247	Forestville	NY	14062	Round Top Rd	Villanova	MOL
151.00-1-35	Dennis & Denise Gould	9020 Zahm Rd	Forestville	NY	14062	Zahm Rd	Villanova	MOL
151.00-1-38	Francina Manning	57 Ivanhoe Rd	Cheektowaga	NY	14215	Zahm Rd	Villanova	MOL
151.00-1-4.1	Richard Langworthy	3429 E Main Road	Dunkirk	NY	14048	Round Top Rd	Villanova	MOL
151.00-1-4.2	James Piede	63 Burgess St.	Silver Creek	NY	14136	Round Top Rd	Villanova	MOL
151.00-1-5	Francina Manning	57 Ivanhoe Rd	Cheektowaga	NY	14215	Round Top Rd	Villanova	MOL
151.00-1-6	John Tourjie	9629 South Protection Rd	Holland	NY	14080	Round Top Rd	Villanova	MOL
151.00-1-7	Carl Yaskow	38 Guernsey Street	Buffalo	NY	14207	Round Top Rd	Villanova	MOL
151.00-1-8	Dennis & Denise Gould	9020 Zahm Rd	Forestville	NY	14062	Zahm Rd	Villanova	MOL
151.00-1-9	Dennis & Denise Gould	9020 Zahm Rd	Forestville	NY	14062	Round Top Rd	Villanova	MOL

Table 5: Property Owner Information

Tax ID	Property Owner	Mailing Address				Property Location		Status
		Street Address	City	State	Zip Code	Road	Town	
151.00-2-14	Ronald & Katherine McNamara	8965 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
151.00-2-15	Crowell Family Holdings, LLC c/o Daniel Crowell & Robert Crowell	1394 Rt 83 1414 Cassadaga Rd	South Dayton	NY	14138	Round Top Rd	Villanova	MOL
151.00-2-17	James & Betty Clarke	8984 Round Top Rd	Forestville	NY	14062	Round Top Rd	Villanova	MOSA
151.00-2-18	John Butcher	249 Berwick Rd	Columbia	SC	14701	Round Top Rd	Villanova	MOSA
	Gaylord C. TenEyck Gary N. TenEyck	8986 Round Top Rd 8406 S. Otis St.	Forestville Littleton	NY CO	14062 80128			
151.00-2-19	Crowell Family Holdings, LLC c/o Daniel Crowell & Robert Crowell	1394 Rt 83 1414 Cassadaga Rd	South Dayton	NY	14138	Round Top Rd	Villanova	MOL
151.00-2-20	Lorrie Pechelka	PO Box 247	Forestville	NY	14062	Round Top Rd	Villanova	MOL
151.00-2-21	Lorrie & Richard Pchelka	PO Box 247	Forestville	NY	14062	Round Top Rd	Villanova	MOL
151.00-2-22	Lorrie & Richard Pchelka	PO Box 247	Forestville	NY	14062	Round Top Rd	Villanova	MOL
151.00-2-23	Dennis & Denise Gould	9020 Zahm Rd	Forestville	NY	14062	Round Top Rd	Villanova	MOL
151.00-2-3.1	James Partyka	PO Box 345	Forestville	NY	14062	Pope Hill Rd	Villanova	MOL
151.00-2-4.1	Daniel & Paula Troutman	9249 North Hill Rd	South Dayton	NY	14138	Pope Hill Rd	Villanova	MOL
151.00-2-5.1	Stuart & Helen Woodside	1041 Kline Rd	Williamsville	NY	14221	Pope Hill Rd	Villanova	Negotiating
151.00-2-5.2	Robert Barnes	9225 Pope Hill Rd	Forestville	NY	14062	Pope Hill Rd	Villanova	Negotiating
151.00-2-7.1	Robert Barnes	9225 Pope Hill Rd	Forestville	NY	14062	North Hill Rd	Villanova	Negotiating
151.00-2-7.2	Robert Barnes	9225 Pope Hill Rd	Forestville	NY	14062	North Hill Rd	Villanova	Negotiating
151.00-2-9	Daren Waterman	9077 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
152.00-1-1	Jared Hagmier	9437 Ball Hill Rd	Forestville	NY	14062	Ball Hill Rd	Villanova	MOL
152.00-1-10	Donald & Margaret Ortel	PO Box 275	Forestville	NY	14062	Prospect Rd	Villanova	MOL
152.00-1-11	Daniel & Paula Troutman	9249 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
152.00-1-12	Joesph Partyka	PO Box 219	South Dayton	NY	14138	Prospect Rd	Villanova	MOL
152.00-1-13	Robert Malvestuto Sr.	2279 Niagara Falls Blvd	Niagara Falls	NY	14304	County Rd 621	Villanova	MOL
152.00-1-14	Robert Malvestuto Sr.	2279 Niagara Falls Blvd	Niagara Falls	NY	14304	County Rd 621	Villanova	MOL
152.00-1-20	Everett Wolfe	7320 E. Shoreward	Tucson	AZ	85715	Smith Rd	Villanova	MOL

Table 5: Property Owner Information

Tax ID	Property Owner	Mailing Address				Property Location		Status
		Street Address	City	State	Zip Code	Road	Town	
	Bryce Wolfe	Loop 2118 W. Painted Sunset Circle			85745			
152.00-1-21	Shawn Howard Ronald & Katherine McNamara	PO Box 193	South Dayton	NY	14138	Smith Rd	Villanova	MOL
152.00-1-33	Shawn Howard	8965 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
152.00-1-41	Shawn Howard	PO Box 193	South Dayton	NY	14138	Smith Rd	Villanova	MOL
152.00-1-43	Allen Ecker	9153 North Hill Road	Forestville	NY	14062	North Hill Rd	Villanova	Negotiating
152.00-1-5	Donald & Margaret Ortel	PO Box 275	Forestville	NY	14062	Prospect Rd	Villanova	MOL
152.00-1-9	Jared Hagmier	9437 Ball Hill Rd	Forestville	NY	14062	North Hill Rd	Villanova	MOL
152.00-2-1	John Gibbs	8483 Route 353	Gowanda	NY	14070	Route 87	Villanova	MOL
152.00-2-14	John M. and June Harvey	9235 Dye Road	South Dayton	NY	14138	Dye Rd	Villanova	MOL
152.00-2-18	Arthur F. & Elaine Nagel	9139 Dye Rd	South Dayton	NY	14138	Dye Rd	Villanova	MOL
152.00-2-20	Robert Malvestuto Sr.	2279 Niagara Falls Blvd	Niagara Falls	NY	14304	Ball Hill Rd	Villanova	MOL
152.00-2-4	Arthur & Diane Miller	PO Box 122	Forestville	NY	14062	Prospect Rd	Villanova	MOL
152.00-2-5	Troy & Tina Clugston	9240 Prospect Rd	Forestville	NY	14062	Prospect Rd	Villanova	MOL processing
152.00-2-6	Joseph & Bertha Miller Lester Miller	7816 Route 474 7820 Route 474	Panama	NY	14767	Bartlett Hill Rd	Villanova	MOL
168.00-1-31	Norman Jacobs	329 Huntington Ave	Buffalo	NY	14214	Route 83	Villanova	
168.00-1-32	Benny\$ Sharon Botitta Jr.	1258 Route 83	South Dayton	NY	14138	Route 83	Villanova	MOL
168.00-1-42	William & Stephanie Eaton	43 Waverly St	Cattaraugus	NY	14719	Villanova Rd	Villanova	MOSA
168.00-1-43	Daniel D. Tenerewicz	PO Box 855	Derby	NY	14047	Villanova Rd	Villanova	Negotiating
168.00-1-44	Rodney Congdon James Congdon	34 Madaline Lane 1287 Villanova Rd	Depew South Dayton	NY	14043 14138	Villanova Rd	Villanova	MOL
168.00-1-45	Ronald & Katherine McNamara	8965 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
168.00-1-47	Kristopher Ivett	8778 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
168.00-1-49	Kristopher Ivett	8778 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
169.00-1-16	Kristopher Ivett	8778 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL
169.00-1-2	Ronald & Katherine	8965 North Hill Rd	South Dayton	NY	14138	North Hill Rd	Villanova	MOL

Table 5: Property Owner Information

Tax ID	Property Owner	Mailing Address				Property Location		Status
		Street Address	City	State	Zip Code	Road	Town	
	McNamara							
169.00-1-7	Everett Wolfe Bryce Wolfe	7320 E. Shoreward Loop 2118 W. Painted Sunset Circle	Tucson	AZ	85715 85745	Smith Rd	Villanova	MOL
169.00-1-8	Everett Wolfe Bryce Wolfe	7320 E. Shoreward Loop 2118 W. Painted Sunset Circle	Tucson	AZ	85715 85745	Smith Rd	Villanova	MOL
169.00-1-9.1	Kristopher & Becky Ivett	8778 North Hill Rd	South Dayton	NY	14138	Villanova Rd	Villanova	MOL

Table 6: Property Identification of Each Turbine

Turbines ID	Tax Map ID
T2	134.00-1-40
T3	168.00-1-32
T4	168.00-1-49
T5	168.00-1-43
T6	151.00-2-15
T7	151.00-2-20
T8	151.00-2-21
T9	151.00-2-7.2
T11	151.00-2-3.1
T13	152.00-1-13
T14	152.00-1-12
T15	152.00-1-10
T16	134.00-2-19
T17	134.00-2-18
T18	134.00-2-24
T19	152.00-2-20
T20	152.00-2-5
T21	152.00-2-18
T23	152.00-2-6
T27	135.00-1-3
T28	135.00-1-6
T30	135.00-1-1
T31	118.00-1-38
T33	118.00-1-41
T34	118.00-1-8
T35	118.00-1-4
T36	118.00-1-37
T37	118.00-1-11
T39	151.00-1-4.2

Section II – Site Plans

5. Plot Plan of Project

Elements of the Plot Plan, provided in compliance with Wind Law §690.07, are shown on the following pages as follows:

- a. Property lines and physical dimensions of the site: **see Figures 3 and 4.**
- b. Location, approximate dimensions, and types of major existing structures within five hundred (500) feet of the boundaries of the proposed Wind Overlay District: **All structures identified in this area are estimated to be approximately 2500 square feet in size. See Figures 3 and 4.**
- c. Location and elevation of each proposed WECS: **See Figures 3 and 4 and Table 7.**
- d. Location of all above ground utility lines on this site within one radius of the Total Height of the WECS or other Project components: **See Figure 5.**
- e. Location and size of structures above 35 feet within a five hundred foot radius of the proposed WECS: **There are no structures above 35 feet within a five hundred foot radius of the proposed WECS, see Figures 3 and 4.**
- f. Zoning designation of the subject and adjacent properties as set forth in the official zoning map: **see Table 8.**
- g. Proposed boundaries of the Wind Overlay District: **see Figures 3 and 4.**
- h. Compliance with setback requirements: **see Figures 3 and 4.**
- i. Location of residential structures within 1,200 feet of the tower: There are no residential structures within 1,200 feet of any WECS (**see Figures 3 and 4 and Table 9).**
- j. All proposed facilities: **see Figures 3 and 4.** There is no proposed fencing in the Town of Villenova (around the WECS, O&M building, or laydown areas). Fencing will only be placed around the substations located in the Town of Hanover.

Fencing will be a non-corrosive and metallic, 8 feet high rigid chain link perimeter fence. No open gap of more than 4 inches anywhere along the fence (gates, bottom, between panels, etc.) shall be allowed. The fence shall exceed minimum NESC clearances and allow for adequate drive path around substation equipment. The fence is to be fitted with a high level outward facing, crank fitted with 3 strands of barbed wire – cranks shall be able to support 250 lbs downward force at the outermost end of the arm. The fence shall have lockable gates to enable the compound to be secured and to allow separate access for pedestrians and service vehicles. All gates shall be grounded per IEEE 80 – “Guide for Safety in AC Substation Grounding”. Vehicle gates shall be a minimum of 20 feet wide - all vehicle gates shall include a man gate. All gates shall open to the inside of the fence, unless grounding provisions are made to ensure that the ground grid is always a minimum of 40

inches beyond the swing of the gate to allow for safe touch potentials when the gates are swung open.

The fence shall be fitted with normalized bilingual (English & Spanish) warning signs with the inscription “DANGER – HIGH VOLTAGE” and a contact telephone number. An isolation fence shall be installed between any contiguous neighboring fences. This is necessary to avoid energizing neighboring fences during fault conditions on the substation grid. All fence materials or sections not installed according to this specification shall be removed and replaced.

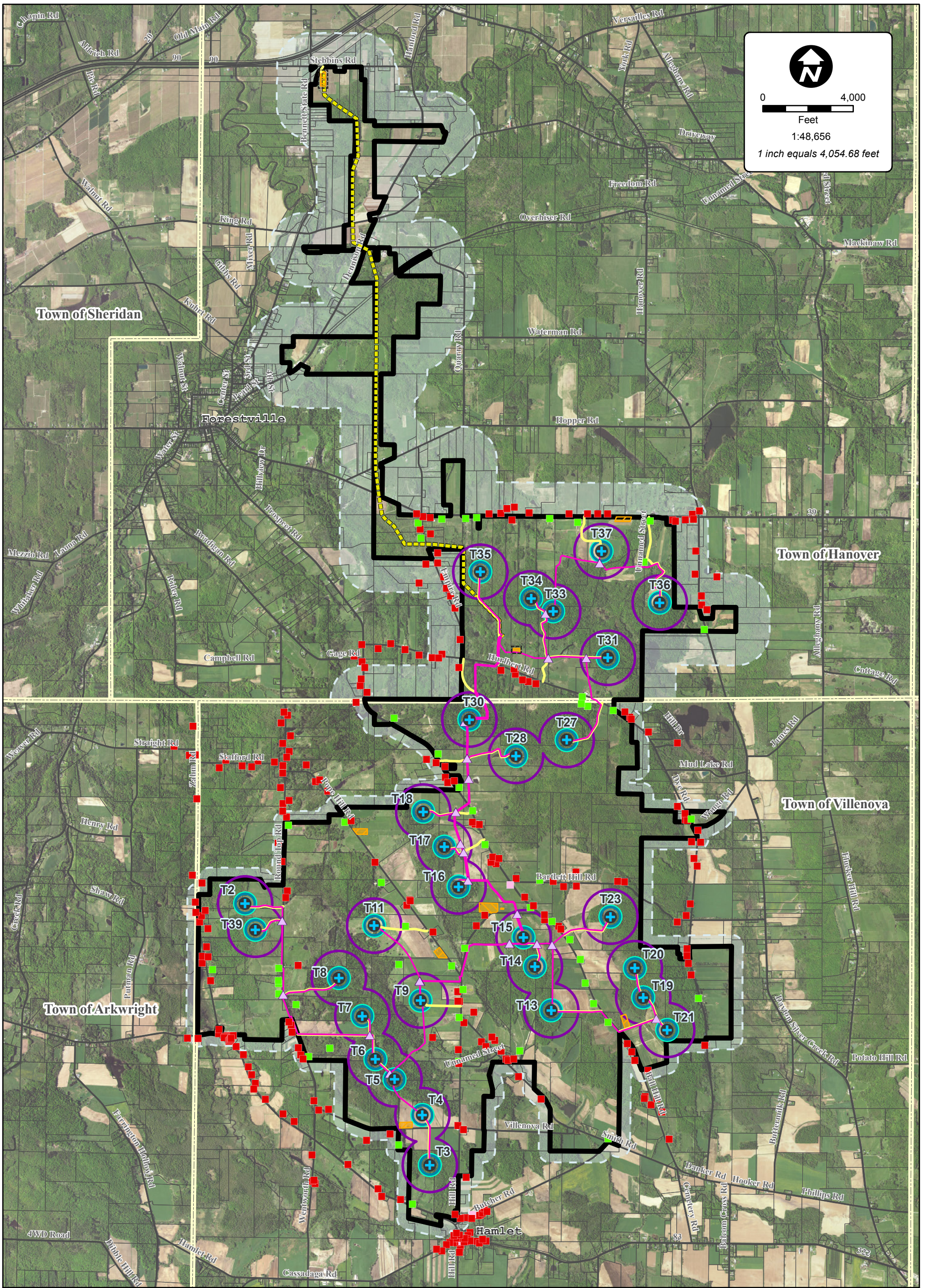


Figure 3: Ball Hill Wind Project

- Wind Overlay District
- Wind Overlay District Buffer
- 1.5 Tower Height Radius (428ft)
- 1200' Radius
- 500' Radius
- Town Boundary
- Structure:**
- Participating Residence
- Non-participating Residence
- Non-residential Structure

Proposed Infrastructure:

- Turbine (87m hub height)
- Junction Box
- Transmission Line
- Access Road
- Collection
- Substation/Switchyard Proposed to be Fenced
- Laydown Area
- O & M Building/Laydown

Renewable Energy Systems

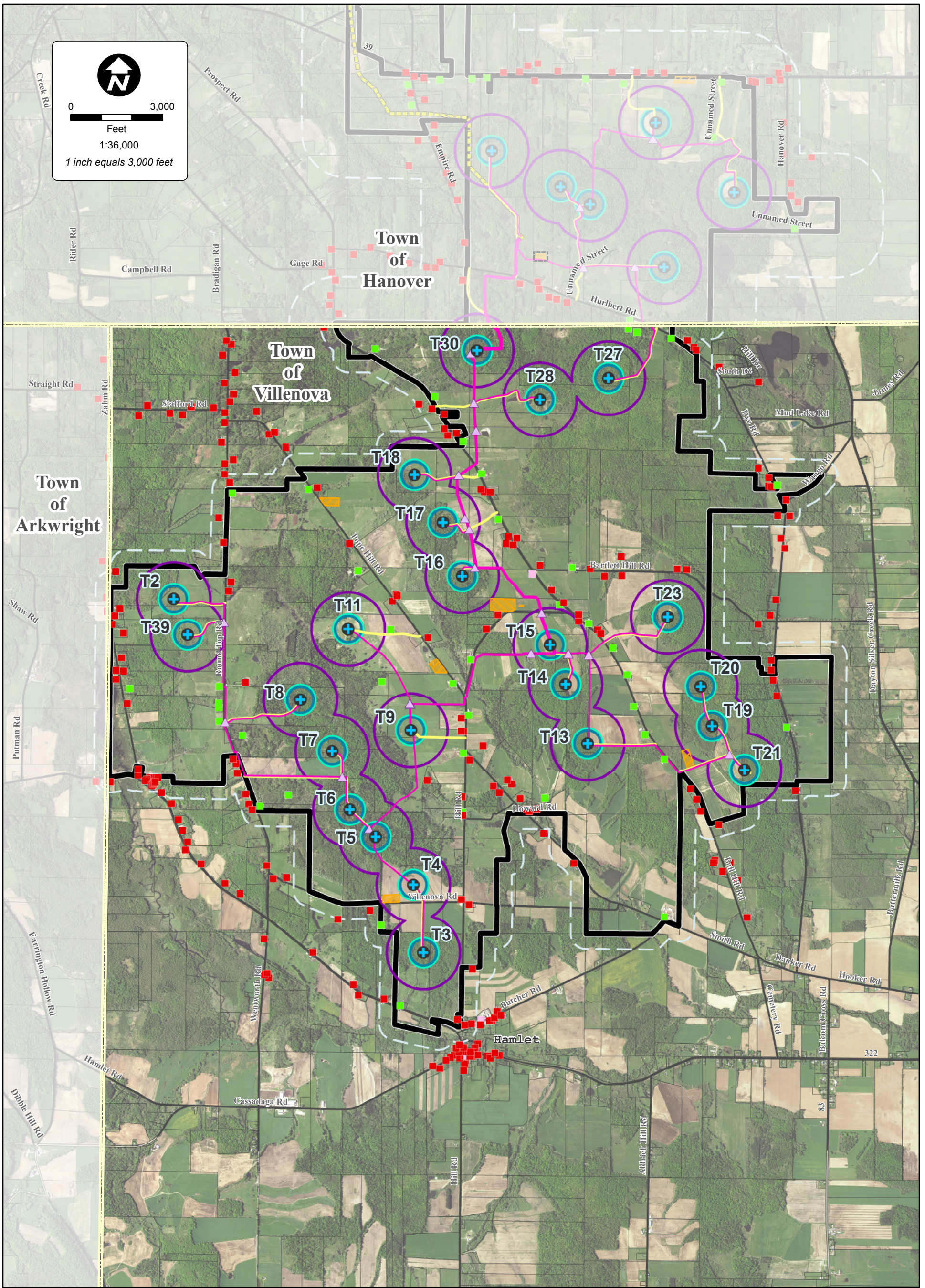


**11101 W. 120th Ave., Suite 400
Broomfield, CO, 80021**

Phone: (303) 429-4200 Fax: (303) 429-4299

COORDINATE SYSTEM: NY West Zone, NAD83
LAYOUT NUMBER: DRAWING NO.: 23105D6916-01
DRAWN BY: AP DATE: 06/09/2016

This drawing is the property of RES America Developments Inc. and no reproduction may be made in whole or in part without permission.



**Figure 4: Ball Hill Wind Project
Town of Villenova**

- | | |
|---------------------------------|-----------------------------|
| Wind Overlay District | Town Boundary |
| Wind Overlay District Buffer | Structure: |
| 1.5 Tower Height Radius (428ft) | Participating Residence |
| 1200' Radius | Non-participating Residence |
| 500' Radius | Non-residential Structure |

Proposed Infrastructure:

- Turbine (87m hub height)
- Junction Box
- Transmission Line
- Access Road
- Collection
- Substation/Switchyard Proposed to be Fenced
- Laydown Area
- O & M Building/Laydown

Renewable Energy Systems



**11101 W. 120th Ave., Suite 400
Broomfield, CO, 80021**

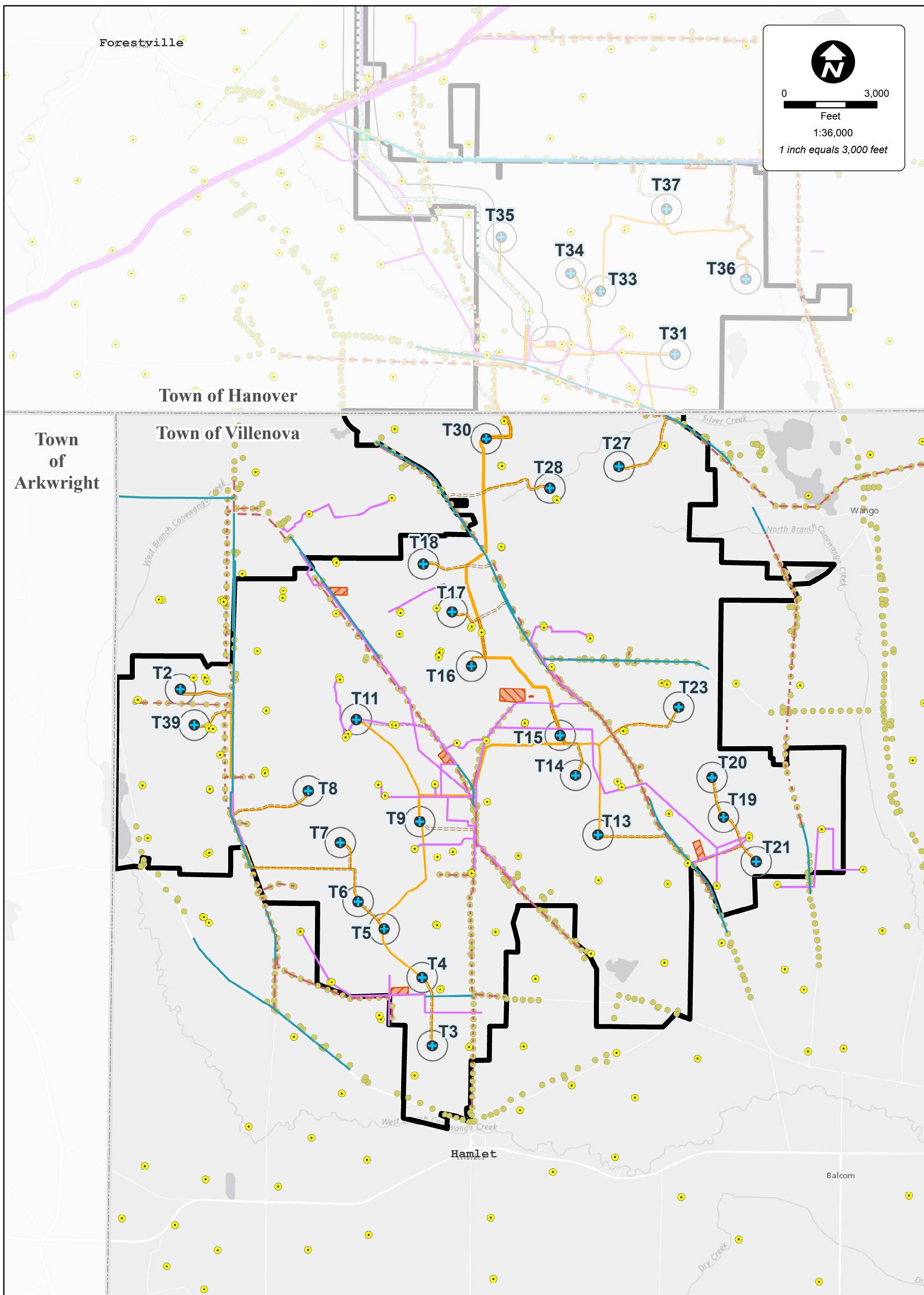
Phone: (303) 429-4200 Fax: (303) 429-4299

COORDINATE SYSTEM: NY West Zone, NAD83
LAYOUT NUMBER: DRAWING NO.: 23105D6920-01
DRAWN BY: AP DATE: 06/09/2016

This drawing is the property of RES America Developments Inc. and no reproduction may be made in whole or in part without permission.

Table 7: WECS Location Coordinates

TURBID	UTM Zone 17 NAD27		LONGITUDE	LATITUDE	Elevation
	Easting (m)	Northing (m)			Height of Base (m)
T2	650546	4696776	79° 10' 13.6859" W	42° 24' 38.2411" N	477.24
T3	653136	4693322	79° 08' 23.7392" W	42° 22' 44.4903" N	488.64
T4	653016	4693993	79° 08' 28.3423" W	42° 23' 06.3193" N	500.14
T5	652627	4694463	79° 08' 44.8970" W	42° 23' 21.8252" N	493.72
T6	652362	4694726	79° 08' 56.2303" W	42° 23' 30.5350" N	499.52
T7	652169	4695304	79° 09' 04.1172" W	42° 23' 49.4014" N	487.22
T8	651838	4695807	79° 09' 18.1103" W	42° 24' 05.9345" N	489.14
T9	652948	4695535	79° 08' 29.8402" W	42° 23' 56.3362" N	473.28
T11	652294	4696526	79° 08' 57.4885" W	42° 24' 28.9124" N	484.8
T13	654713	4695453	79° 07' 12.7669" W	42° 23' 52.4216" N	499.69
T14	654476	4696036	79° 07' 22.5539" W	42° 24' 11.4822" N	516.72
T15	654312	4696426	79° 07' 29.3478" W	42° 24' 24.2375" N	528.52
T16	653416	4697086	79° 08' 07.8911" W	42° 24' 46.2639" N	500.32
T17	653209	4697617	79° 08' 16.4337" W	42° 25' 03.6181" N	500.34
T18	652911	4698082	79° 08' 29.0207" W	42° 25' 18.8980" N	506.44
T19	655948	4695663	79° 06' 18.5601" W	42° 23' 58.3362" N	522.22
T20	655824	4696053	79° 06' 23.6011" W	42° 24' 11.0635" N	517.88
T21	656284	4695233	79° 06' 04.2910" W	42° 23' 44.1592" N	511.96
T23	655475	4696738	79° 06' 38.1935" W	42° 24' 33.5124" N	499
T27	654817	4699101	79° 07' 04.6747" W	42° 25' 50.5577" N	488
T28	654141	4698868	79° 07' 34.4684" W	42° 25' 43.4920" N	488.28
T30	653498	4699340	79° 08' 02.1390" W	42° 25' 59.2460" N	489.44
T39	650694	4696426	79° 10' 07.5441" W	42° 24' 26.7958" N	489.28



Utilities: Figure 5: Utilities, Ball Hill Wind Project

- Utility Pole
- Fiber Level 3 Comm
- Gas Well
- Gas
- National Fuel Distribution Lines
- - - Telephone
- CAT 5
- Fiber Level 3 Comm
- - - Overhead
- Underground (Verizon)

Town of Villenova

- Wind Overlay District
- 492' Buffer
- Town Boundary

Proposed Infrastructure:

- Turbine (87m hub height)
- - - Access Road
- Collection
- - - Transmission Line
- Substation/Switchyard
- Laydown Area
- O & M Building/Laydown

This drawing is the property of RES America Developments Inc. and no reproduction may be made in whole or in part without permission.

Renewable Energy Systems



11101 W. 120th Ave., Suite 400
Broomfield, CO, 80021

Phone: (303) 429-4200 Fax: (303) 429-4299

COORDINATE SYSTEM: NY West Zone, NAD83
LAYOUT NUMBER: DRAWING NO.:23105D6918-01
DRAWN BY: AP DATE: 02/09/2016

Table 8: Zoning Designations of the Project – Components in Villenova	
Wind Energy Facility	Town of Villenova Zoning Designation
T2	Agricultural and Residential (ARI)
T3	Agricultural and Residential (ARI)
T4	Agricultural and Residential (ARI)
T5	Agricultural and Residential (ARI)
T6	Agricultural and Residential (ARI)
T7	Agricultural and Residential (ARI)
T8	Agricultural and Residential (ARI)
T9	Agricultural and Residential (ARI)
T11	Agricultural and Residential (ARI)
T13	Agricultural and Residential (ARI)
T14	Agricultural and Residential (ARI)
T15	Agricultural and Residential (ARI)
T16	Agricultural and Residential (ARI)
T17	Agricultural and Residential (ARI)
T18	Agricultural and Residential (ARI)
T19	Agricultural and Residential (ARI)
T20	Agricultural and Residential (ARI)
T21	Agricultural and Residential (ARI)
T23	Agricultural and Residential (ARI)
T27	Agricultural and Residential (ARI)
T28	Agricultural and Residential (ARI)
T30	Agricultural and Residential (ARI)
T39	Agricultural and Residential (ARI)
Access Roads	Agricultural and Residential (ARI)
Access Roads	Transitional (T)
Collection Lines	Agricultural and Residential (ARI)
Collection Lines	Transitional (T)
Laydown Areas	Agricultural and Residential (ARI)

Table 9: Distance of Proposed WECS to any Residence within 1,200 feet

In the layout as revised and hereby submitted no proposed WECS would be located within 1,200 feet from a residence.

6. WECS Drawing

Figure 6 shows the vertical drawing and access door for the WECS. The tower and all WECS components will be off-white and non-reflective as described in the attached Visual Resource Assessment (VRA) (Appendix H of this Amended Application). All climbing ladders will be internal and accessed only through the access door of the WECS. Additional information the specifications of the WECS are presented in Appendix A, Vestas 126, 3.45 MW Series Wind Turbine Brochure.

Figure 6 Vertical Drawing of Vestas V126 Wind Energy Turbine

Inset photograph of V126 Access Door

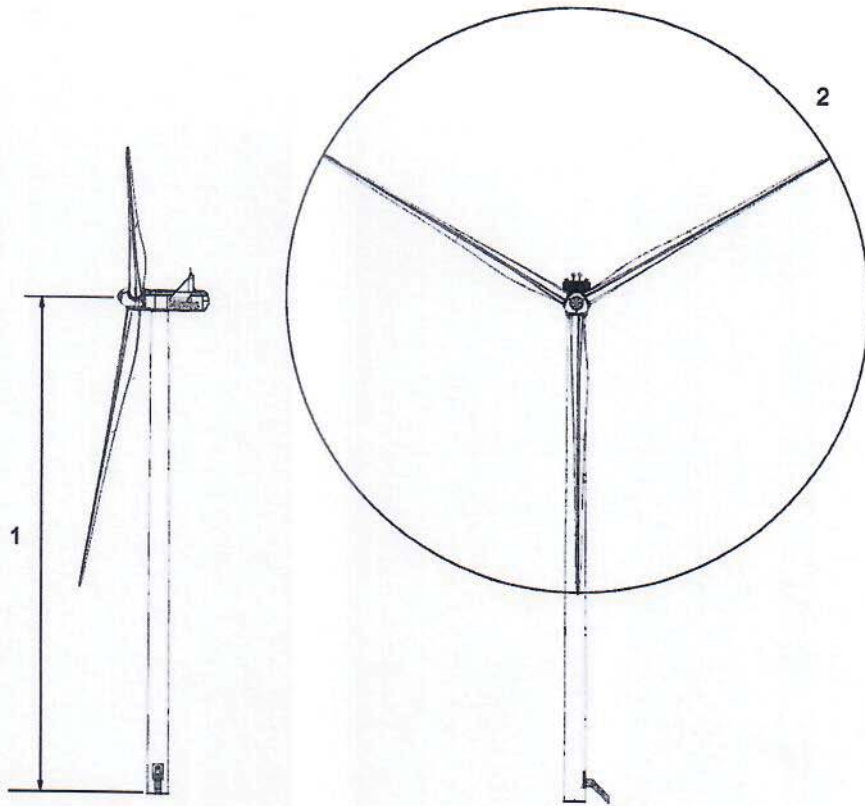


Figure 4-1: Illustration of outer dimensions – structure

1 Hub height 87/117/137 m

2 Diameter: 126 m



7. Landscaping Plan

As set forth in the SDEIS, during construction of the Project a total of 330.1 acres of vegetation will be cleared within the 13,659 acres Project Area and a total of 282.6 acres of soils will be disturbed within the 13,659 acres Project Area. The same methods, nature and extent of clearing around the wind energy facilities and the means of restoration of disturbed and cleared areas described in the SDEIS will be employed for the revised layout. Accordingly, the Applicant summarizes those methods below:

1. Due to the size and nature of the wind energy facilities, no plantings in the cleared areas for the wind turbines, substations or along transmission line are proposed. No plantings are proposed at the proposed O&M building unless requested by the Town Board to maintain a neat and orderly appearance.
2. Natural Revegetation. Some cleared areas will be allowed to revegetate without limit. Existing seed banks and adjacent plant communities will encourage the re-establishment of naturally occurring native plants and allow the revegetated areas to recover to its pre-construction contour and conditions. These areas include access road construction rights-of-way, underground collection lines, and construction laydown and truck staging areas. Of note, within agricultural areas, landowners will be consulted so that the revegetation complements on-going farm operations.
3. Vegetation management. Some cleared areas will be allowed to revegetate in a limited fashion, subject to vegetative management plans designed to permit safe operation of Project facilities. As an example, the above-ground transmission line corridor will be cleared as described in the SDEIS and the right-of way maintained in partially revegetated state to prevent interference or damage to the transmission line and facilities. This right-of-way maintenance will be performed subject to a Vegetative Management Plan in accordance with the applicable NYSPSC regulations. A copy of the Vegetation Management Plan will be provided to the Town upon issuance of the Certificate of Public Convenience and Necessity (CPCN) by the NYSPSC.
4. Permanently Cleared. Some cleared areas such as those for permanent Project facilities will be maintained permanently cleared of natural vegetation. These areas include the radial clearances around turbine tower bases, permanent access roads, substations and the proposed operations and maintenance (O&M) building.

The following table summarizes these cleared areas by category and approximate acreage.

Table 10: Approximate Acreage Cleared by Landscape Category		
Category	Approximate Acreage	Examples
Unlimited natural revegetation	180.1	Construction right-of-ways for access, underground collection lines, laydown and truck staging areas
Limited natural vegetation subject to NYSPSC approved ROW management plan	61.8	Above-ground transmission line corridor
Permanently cleared areas	88.1	Turbine tower/base radial clearance areas, substations, O&M building

Note: this Table provides a summary of the proposed clearing in the SDEIS. Updates to the acreages based on the proposed layout will be provided in the FEIS.

8. Lighting Plan

For the WECS, the Project proposes to light 22 of the 29 WECS in accordance with the Federal Aviation Administration (“FAA”) Advisory Circular 70/7460-1 L, Obstruction Marking and Lighting (“FAA Advisory Circular”), a copy of which is attached hereto as Appendix C. This plan calls for perimeter turbines to be lighted, as well as interior turbines, with a maximum gap between lit turbines of no more than 0.50 miles (2,640 feet). The lights to be used in this plan are synchronized red lights and are identified in the VRA. The specifications for these lights are included as part of Section 17 a/b of this Amended Application. The updated Visual Resource Assessment (VRA (see Section 17a/b of this Amended Application) illustrates the specific WECS which will receive lights during operation of the Project (see Section 17 a/b, Figure 3). Under FAA protocol, during construction all 29 WECS will be fitted with a temporary light.

When the Project layout is final (i.e., all permits and approvals having been received so that no material changes, additions, or removals will be made), the Applicant will request that FAA approve the lighting plan submitted herein. As the lighting plan follows the advisory circular lighting standards, it is anticipated that the lighting plan will be approved by the FAA and seven WECS will have lights removed accordingly. The Applicant will provide all updated FAA Determinations of No Hazard to the Town prior to the issuance of any building permits; current FAA Determinations of No Hazard are attached to this Amended Application as Appendix D on a CD.

Lighting in the substation will consist primarily of manually activated exterior lighting and temporary work lighting installed as needed. During normal operations the substation will not be lit except as required for site security and/or as required by federal, state, or local agencies. Routine maintenance work at the substation is expected to occur during daylight hours however nighttime work (requiring lighting) may be required in an emergency or for reliability reasons. Generally, there will not be any other lighting provided as part of the Project except minimal ground light fixtures to be operated manually for the bases of the turbines and the O&M facility.

9. Property Owners within 500 feet of the Proposed Wind Overlay District

Table 11 included on the following pages, identifies all property owners in the Town of Villenova either within the proposed Wind Overlay District or within 500 feet of the proposed Wind Overlay District.

In accordance with Town Law 283-a(2), the Applicant submits the attached Agricultural Data Statement (see Appendix E) as the Project is located in two Chautauqua County Agricultural Districts: District 5 (CHAT005) and District 10 (CHAT010). The Applicant will provide a copy of the agricultural data statement to all property owners in the Project Area who are located within one of these agricultural districts and/or within 500 feet of one of the agricultural districts together with the required notices for the public hearing to be held on the Amended Application.

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
135.00-2-45.3; 135.00-2-46	Aguglia	Joseph	9942	Dye	Rd	Forestville	NY	14062
134.00-1-48.2	Aldinger	Matthew	PO Box 354			Forestville	NY	14062
134.00-1-41	Andrews	Andrew	PO Box 282			Dunkirk	NY	14048
153.00-1-66	Arent	Mark	135	Vern	Ln	Cheektowaga	NY	14227
135.00-1-1	Ball Hill Camp Corp		68	Main	St	Angola	NY	14006
135.00-1-22	Ball Hill Cemetery							
151.00-1-25	Barmore	Althea	1795	Route 83		Forestville	NY	14062
151.00-1-26; 151.00-1-36; 150.00-2-18	Barmore	Russell	1795	Route 83		Forestville	NY	14062
168.00-1-39	Barnes	David	8225	Milestrip Rd		South Dayton	NY	14138
151.00-2-7.1; 151.00-2-7.2	Barnes	Robert	9225	Pope Hill	Rd	Forestville	NY	14062
151.00-2-5.2	Barnes	Susan	9225	Pope Hill	Rd	Forestville	NY	14062
151.00-1-48	Bell	Corey	9378	Zahm	Rd	Forestville	NY	14062
135.00-1-12	Benchley	Robert	11437	Bennett State	Rd	Forestville	NY	14062
169.00-2-1	Benes	Randolph	3955	Yale		Hamburg	NY	
150.00-2-5	Benton	Allen	292	Water	St	Fredonia	NY	14063
152.00-2-3	Blasdell	James	9314	Ball Hill	Rd	Forestville	NY	14062
152.00-1-8	Blasdell	Stephen	9293	North Hill	Rd	South Dayton	NY	14138

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
134.00-2-23.3	Bly	Kristy	2152	chapin Rd.		Silver Creek	NY	14136
151.00-1-37	Booth	Kevin	9190	Zahm	Rd	Forestville	NY	14062
168.00-1-33	Bottita	Benny	1258	Route 83		South Dayton	NY	14138
168.00-1-32	Bottita	Sharon	1258	Route 83		South Dayton	NY	14138
150.00-2-13	Brainard	Steven	12697	Cowens Corner	Rd	Conewango Valley	NY	14726
151.00-2-11	Brain-Bauer	Richard	8995	North Hill	Rd	South Dayton	NY	14138
152.00-1-6	Bromley	Laverne	9315	North Hill	Rd	South Dayton	NY	14138
135.00-2-7	Brunea	Chris	609	Harris Hill	Rd	Lancaster	NY	14086
135.00-1-26	Buelar	Danisue	916	Bartlett Hill	Rd	South Dayton	NY	14138
135.00-1-31; 135.00-1-32; 135.00-1-33	Buelow	Wayne	916	Bartlett Hill	Rd	South Dayton	NY	14138
135.00-1-3; 135.00-2-1	Bunker	Douglas	775	Hurlbert	Rd	Forestville	NY	14062
152.00-1-16; 152.00-1-19	Burek	Peter		PO Box 214		South Dayton	NY	14138
151.00-2-18	Butcher	John	46	Peterson	St	Jamestown	NY	14701
169.00-1-18	Butcher	Kandice	505	Rt 83		South Dayton	NY	14138
169.00-1-17	Butcher	Keith	8664	North Hill	Rd	South Dayton	NY	14138
168.20-1-4; 169.00-1-21	Butcher	Lynn	970	Butcher	Rd	South Dayton	NY	14138

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
152.00-1-38.1; 152.00-1-38.2	Caparco	Antimo	6016	Rt 62		Conewango Valley	NY	14726
135.00-2-6; 135.00-2-8; 169.00-1-3	Chagrin Land Limited Partnership		30799	Pinetree	Rd	Pepper Pike	OH	44124
152.00-1-34	Chase	Dollie	Rt 322	Box 307		South Dayton	NY	14138
151.00-2-17	Clarke	James	8984	Round Top	Rd	Forestville	NY	14062
152.00-2-5	Clugston	Troy	9240	Prospect	Rd	Forestville	NY	14062
134.00-2-26	Colvenback	Brian	9735	Prospect	Rd	Forestville	NY	14062
151.00-1-40; 151.00-1-41; 151.00-1-45	Colvenback	Roger	3748	Bard	Rd	Cassadaga	NY	14718
168.00-1-44	Congdon	James	1287	Villanova	Rd	South Dayton	NY	14138
151.00-1-50	Covert	Darren	9400	Zahm	Rd	Forestville	NY	14062
135.00-1-2; 135.00-1-5	Cronkhite	Kevin	911	Hurlburt	RD	Forestville	NY	14062
135.00-2-23	Crowell	Alyce	1542	Hamlet Cassadaga	Rd	Forestville	NY	14062
135.00-2-20; 152.00-2-9; 152.00-2-10	Crowell	Howard	1542	Hamlet Cassadaga	Rd	Forestville	NY	14062
135.00-1-34	Crowell	Marilyn	858	Bartlett Hill	Rd	South Dayton	NY	14138- 9625

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
135.00-2-14	Crowell	Nelson	9684	Dye	Rd	Forestville	NY	14062
151.00-2-19; 169.00-1-45; 169.00-1-47	Crowell	Robert	1394	Route 83		South Dayton	NY	14138
135.00-2-13	Crowell	Stephen	1389	Moland	Rd	Alfred	NY	14803
151.00-2-15; 168.20-1-63	Crowell Family Holdings, LLC		1394	Route 83		South Dayton	NY	14138
134.00-1-46	Curtis	John	9400	Round Top	Rd	Forestville	NY	14062
134.00-1-42; 151.00-2-1	Curtis	Stephania	9400	Round Top	Rd	Dunkirk	NY	14048
168.20-1-51; 168.20-1-64	Dahn	Arlene	8520	School	St	South Dayton	NY	14138
168.20-1-19	Dayton	David	1073	Butcher	Rd	South Dayton	NY	14138
134.00-1-34	Durski	Frank	9581	Granger	Ave	Angola	NY	14006
135.00-2-48	Dye	Margaret	7	Allegany	Rd	South Dayton	NY	14138
135.00-2-4.2; 135.07-1-1; 135.07-1-3; 135.07-1-4	Dye	Quentin	250	Seneca	St	Gowanda	NY	14070
135.00-2-25	Eaton	Brenda	8133	Maple Hill	Rd	Cattaraugus	NY	14719
168.00-1-41.2; 168.00-1-42	Eaton	William	43	Waverly	St	Cattaraugus	NY	14719

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
152.00-1-43	Ecker	Merle	9153	North Hill	Rd	Forestville	NY	14062
152.00-2-17.2	Egan	Daniel	783	Hurlburt	Rd	Forestville	NY	14062
152.00-2-19.2; 152.00-2-19.3	Egan	Susan	9017	Dye	Rd	South Dayton	NY	14138
152.00-1-37	Egbert	Henry	1129	Smith	Rd	Forestville	NY	14062
168.20-1-1; 168.20-1-2; 168.20-1-5	Emke-Walker	Michael	8577	North Hill	Rd	South Dayton	NY	14138
151.00-2-24	Ermer	Diana	9200	Round Top	Rd	Forestville	NY	14062
136.00-1-37; 136.00-1-44	Estate of Nick A Restivo		476	Christy	Rd	Irving	NY	14081
135.00-2-3	Everts	David	10247	Empire	Rd	Forestville	NY	14062
150.00-2-12	Fairdawn Farms Inc		9265	Putnam	Rd	Forestville	NY	14062
151.00-1-33	Fisk	Allan	9006	Zahm	Rd	Forestville	NY	14062
134.00-2-12	Gajewski	Callie May	2385	New Jerusalem		Eden	NY	14058
134.00-2-17.1; 134.00-2-24; 135.00-1-9.1	Gajewski	Michael	9658	Prospect	Rd	Forestville	NY	14062
168.20-1-50	Gard	Christine	1151	Rt 83		South Dayton	NY	14138
135.00-2-11	Garrett	Michael	9717	Dye	Rd	Forestville	NY	14062
152.00-2-1.000	Gibbs	John	8483	Rt 353		Gowanda	NY	14070

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
151.00-1-8; 151.00-1-35; 151.00-2-23; 151.00-1-9; 151.00-1-34	Gould	Denise	9020	Zahm	Rd	Forestville	NY	14062
135.00-1-23; 169.00-2-2	Graziano	Shari	10280	Rider	Rd	Forestville	NY	14062
135.00-1-8	Greene	Kathleen	9716	Prospect	Rd	Forestville	NY	14062
134.00-2-16	Greene	Mark	9716	Prospect	Rd	Forestville	NY	14062
169.00-1-9.2	Gregory	Heather	804	Smith	Rd	Forestville	NY	14062
134.00-2-7	Greiner	Kurt	3475	Heatherwood	Dr	Hamburg	NY	14075
151.00-2-3.2	Gutkowski	Anthony	1870	Highway 59		Westminster	SC	29693
152.00-1-2	Hagmier	Bruce	10056	Prospect	Rd	Forestville	NY	14062
152.00-1-1; 152.00-1-9	Hagmier	Jared	9437	Prospect	Rd	Forestville	NY	14062
135.00-2-12	Halstrom	Tammy	9701	Dye	Rd	Forestville	NY	14062
168.00-1-30	Hamlet Cemetery							
152.00-2-14; 152.00-2-15	Harvey	John	9235	Dye	Rd	South Dayton	NY	14138
151.00-2-8	Hatfield	David	E Building	PO Box 102		Cassadaga	NY	14718
134.00-2-21.3	Hayes	Rodney	9373	Pope Hill	Rd	Forestville	NY	14062
134.00-1-47	Hebner	Elenor	9575	Pope Hill	Rd	Forestville	NY	14062

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
135.00-1-14	Holland	Myung	9554	Prospect	Rd	Forestville	NY	14062
135.00-1-27	Homan	Richard	4469	Allegany	Rd	Little Valley	NY	14755
169.00-2-9.1	Hooker	Evelyn	422	Hooker	Rd	South Dayton	NY	14138
135.00-2-30	Howard	Kenneth	9658	Dye	Rd	Forestville	NY	14062
152.00-1-21; 152.00-1-41	Howard	Shawn	PO Box 193			South Dayton	NY	14138
151.00-1-21.1; 151.00-1-29; 151.00-1-32	Hubbard	Robert	5072	W. Shorewood	Dr	Dunkirk	NY	14048
134.00-1-33	Huber	Martin	9619	Round Top	Rd	Forestville	NY	14062
150.00-2-16	Hughes	Richard	1818	Rte 83		Forestville	NY	14062
169.00-1-9.1; 169.00-1-10; 169.00-1-23	Ivett	Howard	752	Smith	Rd	South Dayton	NY	14148
168.00-1-47; 168.00-1-49; 169.00-1-13; 169.00-1-14; 169.00-1-15; 169.00-1-16	Ivett	Kristopher	8778	North Hill	Rd	South Dayton	NY	14138
135.00-2-19	Ivory	Richard	10344	Chestnut	Rd	Dunkirk	NY	14048
152.00-1-17	Jackson	Denise	121	Oak	St	South Dayton	NY	14128
168.00-1-31	Jacobs	Norman	329	Huntington	Ave	Buffalo	NY	14214

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
151.00-1-1.1	Jock	Gary	9454	Zahm	Rd	Forestville	NY	14062
135.00-2-17	JTI Properties, LLC		127	Clinton	Ave	Fredonia	NY	14063
135.00-2-9; 135.00-2-10	King Timberlands, LLC		PO Box 3090			Falconer	NY	14733
134.00-2-33	Kraft	Robert	1360	Seneca Creek	Rd	West Seneca	NY	14224
168.00-1-48	Krill	James	8807	North Hill	Rd	South Dayton	NY	14138
153.00-1-18	Kwilos	David	9335	So. Dayton Silver Creek	Rd	Forestville	NY	14062
134.00-2-21.2	Kwilos	Jacob	9382	Pope Hill	Rd	Forestville	NY	14062
135.00-1-25	Kwilos	Joshua	9460	Prospect	Rd	Forestville	NY	14062
151.00-1-4.1	Langworthy	Richard	3429	Rt 20		Dunkirk	NY	14048
135.00-1-28	LeBarron	Becky	886	Bartlett Hill	Rd	South Dayton	NY	14138
151.00-1-44	Lettieri	Andre	9316	Zahm	Rd	Forestville	NY	14062
151.00-1-13; 151.00-1-21.2; 151.00-1-12	Lindquist	Duane	9057	Round Top	Rd	Forestville	NY	14062
168.20-1-6	Lindquist	Stephen	8875	S. Center	Rd	Cassadaga	NY	14718
134.00-2-1	Logan	Angeline	9942	Bradigan/Round Top	Rd.	Frestville	NY	14062
134.00-2-11; 134.00-2-10; 135.00-1-6	LoManto	Michael	9376	Prospect	Rd	Forestville	NY	14062

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
152.00-1-42; 152.00-1-35; 152.00-1-40	Luce	Charles	1072	Smith	Rd	Forestville	NY	14062
152.00-1-39.1; 152.00-1-36	Luce	Helena	1072	Smith	Rd	Forestville	NY	14062
135.00-2-15	Lukowski	Joseph	150	Blacks Cabin	Way	Dallas	GA	30132
151.00-1-11	Mabel	Ott	10292	Forty	Ed	Gowanda	NY	14070
152.00-2-11	Maciuba	Donald	133	Orchard	Pl	Lackawanda	NY	14218
152.00-1-13; 152.00-2-20; 152.00-1-14	Malvestuto	Robert	2279	Niagara Falls	Blvd	Niagara Falls	NY	14304
151.00-1-5; 151.00-1-38	Manning	Francina	57	Ivanhoe	Rd	Cheektowaga	NY	14215
134.00-1-36; 134.00-1-39.1	Marrano	Birgitta	9491	Round Top	Rd	Forestville	NY	14062
134.00-1-40	McCarthy	Nadine	17	Chestnut	St	Forestville	NY	14062
135.00-2-18	McGraw	Michael	PO Box 928			Key West	FL	33041
135.00-2-16	McGraw	Robert	919	Merriweather Way	Way	Severn	MD	21144
151.00-2-14; 152.00-1-33	McNamara	Katherine	8965	North Hill	Rd	South Dayton	NY	14138
168.00-1-45; 169.00-1-2	McNamara	Ronald	8965	North Hill	Rd	South Dayton	NY	14138

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
134.00-1-49	Merrill	John	PO Box 277			Froestville	NY	14063
134.00-2-5	Metzger	David	3453	East Lake	Rd	Dunkirk	NY	14048
151.00-1-30	Metzger	Robert	1720	Route 83		Forestville	NY	14062
151.00-1-1.2	MidFirst Bank		999	NW Grand	Blvd	Oklahoma City	OK	73118
152.00-2-4	Miller	Diane	9274	Prospect	Rd	Forestville	NY	14062
152.00-2-6.000	Miller	Joseph	7816	Route 474		Panama	NY	14767
134.00-2-32	Mooney	Robert	9672	Pope Hill	Rd	Forestville	NY	14062
135.00-1-13; 135.00-1-24; 152.00-2-13	Nagel	Arthur	9139	Dye	Rd	South Dayton	NY	14138
152.00-2-18	Nagel	Elaine	9139	Dye	Rd	South Dayton	NY	14138
153.00-1-53	Nagel	Marlene	139	Main	St	South Dayton	NY	14138
152.00-2-19.4; 153.00-1-54	Nagel	Richard	139	Main	St	South Dayton	NY	14138
169.00-2-3	National Property Management Associates, Inc		4221	N Buffalo	St	Orchard Park	NY	14127
135.00-2-28	Nerber	Roy	4339	Oak Orchard	Ramp	Clay	NY	13041
168.20-1-17; 168.2-1-18; 168.00-1-49	New York State DOT		1220	Washington Ave		Albany	NY	12232

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
153.00-1-55	Newcomb	Bruce	9047	So Dayton/Silver Creek	Rd	Forestville	NY	14062
151.00-2-6	Newton	Russell	9160	North Hill	Rd	Forestville	NY	14062
169.00-1-5	Nobles	Barry	1601	Attridge	Rd	Churchville	NY	14518
169.00-1-12	Nobles	Herbert	7690	Route 83		South Dayton	NY	14138
169.00-1-4	Nobles	Higley	7978	Route 83		South Dayton	NY	14138
151.00-1-27; 152.00-1-22; 152.00-1-24; 152.00-1-23	Nobles	Nelson	7690	Route 83		South Dayton	NY	14138
134.00-2-14	O'Conner	David	9780	Prospect	Rd	Forestville	NY	14062
134.00-2-13	Oconnor	Florence	9355	Ball Hill	Rd	Forestville	NY	14062
134.00-2-15	O'Connor	Terri	9780	Prospect	Rd	Forestville	NY	14062
168.20-1-15	Odien	Richard	9505	Village Mille Lance		Clarence Center	NY	14032
152.00-1-5; 152.00-1-10.000	Ortel	Donald	9334	Prospect	Rd	Forestville	NY	14062
152.00-1-3	Ortel	Tammy	9354	Prospect	Rd	Forestville	NY	14062
151.00-1-19	Ortendahl	Jon	5978	Twin	Rd	Mayville	NY	14757

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
151.00-2-16	Ortendahl	Julie	5978	Twin	Rd	Mayville	NY	14757
152.00-1-26; 152.00-1-27; 152.00-1-28; 152.00-1-30; 152-1-31; 152.00-1-32	Palmer	Nathan	1022	Smith	Rd	Forestville	NY	14062
151.00-2-3.1	Partyka	James		PO Box 345		Forestville	NY	14062
152.00-1-12	Partyka	Pauline	9171	Prospect	St	Forestville	NY	14062
168.00-1-37	Pascarella	Frank		PO Box 29		Salamanca	NY	14779
151.00-1-3; 151.00-2-20	Pchelka	Lorri	9120	Round Top	Rd	Forestville	NY	14062
151.00-2-21; 151.00-2-22	Pchelka	Richard	9120	Round Top	Rd	Forestville	NY	14062
151.00-2-13	Peate	Jeffrey	8959	North Hill	Rd	South Dayton	NY	14138
168.00-1-46	Peterson	Christina	479	Hunt	Rd	Cherry Creek	NY	14723
152.00-2-8	Philbrick	Donald	9617	SE 77Th	Ave	Milwaukie	OR	97222
151.00-1-4.2	Piede	James	63	Burgess	St	Silver Creek	NY	14136
150.00-2-17	Pike, Jr	Randall	1797	Route 83		Forestville	NY	14062

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
134.00-2-17.2; 135.00-1-9.2; 135.00-1-10; 135.00-1-11; 135.00-1-15.3	Press	Brian	9645	Prospect	Rd	Forestville	NY	14062
135.00-1-7	Press	Frank	9355	Ball Hill	Rd	Forestville	NY	14062
152.00-1-4	Press	Jean	9355	Ball Hill	Rd	Forestville	NY	14062
152.00-2-16; 152.00-2-17.1	Priest	KIm	9201	Dye	Rd	South Dayton	NY	14138
151.00-1-10	Quinn	Lester	9085	Round Top Hill	Rd	Forestville	NY	14062
135.00-1-18	R & K Holland Trust		7447	Silver Cup	Dr	Warrenton	VA	20186
151.00-1-31	R. Hubbard Properties, LLC		5072	West Shorewood	Dr	Dunkirk	NY	14048
134.00-2-4	Raag	Mihkel	9981	Prospect	Rd	Forestville	NY	14062
153.00-1-70	Richter	Anthony	8773	Ball Hill	Rd	Forestville	NY	14062
134.00-1-48.1	Richter	Eugene	10390	Creek	Rd	Forestville	NY	14062
152.00-1-39.2	Roberts	Donna	1044	Smith	Rd	Forestville	NY	14062
168.20-1-14	Rodriguez	Jose	1097	Butcher	Rd	South Dayton	NY	14138
152.00-1-18	Roland	Benjamin	8961	Ball Hill	Rd	Forestville	NY	14062
169.00-1-1	Rolls	Richard	479	Hunt	Rd	Cherry Creek	NY	14723
152.00-1-25	Rose	Judith	1040	Smith	Rd	Forestville	NY	14062

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
168.00-1-35	Rundell	James	9784	Creek	Rd	Forestville	NY	14062
134.00-2-28; 134.00-2-29	Ryder	William	173	Roland	Ave	Lackawanna	NY	14218
134.00-2-20; 135.00-1-19	Sarver	Gloria	9	Congress	Rd	Forestville	NY	14062-0720
135.00-1-29	Schneider	Jason	17	Cedar	St	Forestville	NY	14062
134.00-1-38	Schneiderman	Roy	8160	Westphalinger	Rd	East Amherst	NY	14051
151.00-2-2	School Dist #16							
135.00-2-27; 135.00-2-29	Scofield	James	9596	Dye	Rd	Forestville	NY	14062
134.00-2-18; 134.00-2-19; 134.00-2-22; 135.00-1-15.2	Scott	Harold	9633	Prospect	Rd	Forestville	NY	14062
135.00-1-15.1	Scott	Linda	9633	Prospect	Rd	Forestville	NY	14062-7020
151.00-1-15	Sears	Kathleen	183	Somerville		Tonawanda	NY	14150
134.00-1-39.2	Smith	Michael	9491	Round Top	Rd	Forestville	NY	14062
135.00-2-5.1; 150.00-2-6; 133.00-2-26	Smith	Peter	3177	Whitaker	Rd	Fredonia	NY	14062
151.00-1-14	Smith	Theodore	183	Somerville		Tonawanda	NY	14150

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
151.00-1-39	Snyder	Mark	292	Wrexham Ct North		Tonawanda	NY	14150
168.00-1-41.1	Stearns	Mavis	8043	Route 83		South Dayton	NY	14138
151.00-2-10	Stearns	Roberta	PO Box 7543			Indian Lake Estates	FL	33855
135.00-1-17	Sterlace	Joshua	9601	Prospect	Rd	Forestville	NY	14062
134.00-2-27	Sterling	Bruce	9747	Prospect	Rd	Forestville	NY	14062
169.00-1-11	Storm	Jason	1039	Fawnwood	Dr	Webster	NY	14580
134.00-2-8	Subcarrier Communications, Inc		139	White Oak	Ln	Old Bridge	NJ	08857251 1
134.00-2-6; 135.00-1-4	Swanson	Frieda	9974	Propect	Rd	Forestville	NY	14062
134.00-2-9	Swanson	John	9974	Prospect	Rd	Forestville	NY	14062
152.00-1-15	Szymanski	Richard	8991	Ball Hill	Rd	Forestville	NY	14062
153.00-1-65	Tatchell	Douglas	9114	Silver Creek	Rd	Forestville	NY	14062
168.00-1-43	Tenerewicz	Daniel	7072	Sweetland	Rd	Derby	NY	14047
151.00-1-46; 150.00-2-7	Termer	William	82	Ponderosa Dr		Williamsville	NY	14221
150.00-2-10; 150.00-2-11	Termer	William	3748	Bard	Rd	Cassadaga	NY	14718
152.00-1-7	Titus	Jonathan	15	Maple	Ave	Fredonia	NY	14063
151.00-1-6	Tourjie	John	9626	S. Protection	Rd	Holland	NY	14080

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
168.20-1-16	Town Of Villenova			Butcher	Rd	South Dayton	NY	14138
168.20-1-3	Town Tool House							
134.00-2-23.1	Troutman	Betty	9477	Pope Hill	Rd	Forestville	NY	14062
152.00-1-11; 151.00-2-4.1	Troutman	Paula	9249	North Hill	Rd	South Dayton	NY	14062
152.00-2-2	Troutman	Rose	9320	Ball Hill	Rd	Forestville	NY	14062
134.00-2-23.2	Troutman	Steven	9569	Pope Hill	Rd	Forestville	NY	14062
134.00-1-45; 134.00-2-21.1; 134.00-1-44; 134.00-1-43	Tunstall	John	9400	Pope Hill	Rd	Forestville	NY	14062
134.00-1-37; 151.00-1-1.3; 151.00-1-2	Tweedie	Brock	25	Water	St	Forestville	NY	14062
135.00-2-45; 135.00-2-45.2	Vento	George	15	Lone Eagle	Way	Lownesville	SC	29659
151.00-1-47	Vetter	Jeremy	3525	E. Main	St	Sheridan	NY	14135
152.00-2-12	Wade	Bradley	9271	Dye	Rd	South Dayton	NY	14138
134.00-2-25	Waligora	Timothy	1111	Balmer	Rd	Youngstown	NY	14174
151.00-2-9	Waterman	Daren	9077	North Hill	Rd	South Dayton	NY	14138

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
135.00-1-20; 135.00-1-21	Wesleyan Church							
135.00-1-16	Wesleyan Parsonage							
135.00-2-2	Westlund	Benjamin	9955	Dye	Rd	Forestville	NY	14062
135.00-2-47	Westlund	Heather	9955	Dye	Rd	Forestville	NY	14062
151.00-1-17; 151.00-1-18	William	Clarke	247	Farrell	Rd	West Henrietta	NY	14586
134.00-2-3	Wojcik	Judith	9981	Prospect	Rd	Forestville	NY	14062
152.00-1-20; 169.00-1-6; 169.00-1-7; 169.00-1-8	Wolfe	Everett	7320	E. Shoreward	Loop	Tucson	AZ	85715
152.00-1-29	Wolfe	Jeffrey	987	Smith	Rd	Forestville	NY	14062
151.00-2-5.1	Woodside	Stuart	1041	Kline	Rd	Williamsville	NY	14221
153.00-1-24.1	Woolley	Neva	9239	So. Dayton Silver Creek	Rd	Forestville	NY	14062
135.00-2-4.1	Wunderlich	Marge	3590	Roundbottom	Rd	Cincinnati	OH	45244
151.00-1-7	Yaskow	Carl	38	Guernsey	St	Buffalo	NY	14207
151.00-2-4.2	Young	Robert	9298	Pope Hill	Rd	Forestville	NY	14062
151.00-1-42; 151.00-1-43	Zahm	Jeffrey	9299	Zahm	Rd	Forestville	NY	14062
151.00-2-12	Ziemendorf	George	4313	Wilson-Burt	Rd	Wilson	NY	14172

Table 11: Property Owners within 500 feet of Wind Overlay District

Parcel ID	Last Name	First Name	Address No	Address Street	Street Type	Address Mun	Address State	Address Zip
134.00-1-50	Zimar	Richard	9644	Round Top	Rd	Forestville	Ny	14064

Section III – Project Information

10. Ball Hill Wind Energy Project Decommissioning Plan

The expected useful life of the Project components is 25-30 years, although it is reasonable to expect that this life can and will be extended by proper maintenance.

Wind Energy Conversion Facilities/Systems Decommissioning Process Description

Equipment Removal

1. Turbine Removal – Appropriate sized cranes will be mobilized and the hub, along with blades and nacelle, will be removed to ground level for a scrap company to breakdown and strip high-value components. The remaining material will be reduced to shippable dimensions and transported off site for proper disposal. The internal cabling will be removed and stored prior to delivery to a scrap company for recovery of high-value copper conductor materials. The tower sections will be lowered to grade so they can be cut into transportable sections for delivery to a scrap iron purchaser. Control cabinets in the base will be stripped of high-value components and the balance will be turned over to a scrap company for haul and disposal. The area will be thoroughly cleaned and all debris will be removed.
2. Substation Transformer(s) – Transformers will be removed and depending on the condition will be sold for re-use or sent to a specialty scrap company for recycling where any hazardous materials would be properly disposed of.

Foundation Removal

Turbine and Substation Equipment Foundations – Topsoil will be removed to a proper storage pile to expose subgrade materials, and that area will be excavated to expose the turbine foundation pedestal. All anchor bolts, rebar, conduits, and concrete in the pedestal will be removed to a minimum depth of 48 inches below grade in agricultural lands in accordance with New York State Department of Agriculture and Markets (NYSDAM) guidelines, and a minimum depth of 36 inches below grade in all other areas. After removal of all noted foundation materials, the holes will be filled with clean compatible subgrade material that is compacted to a density similar to the surrounding fields, covered with the topsoil from the protected stockpile of material, and then graded to match adjacent contours. All unexcavated areas compacted by equipment used during decommissioning shall be tilled in a manner adequate to restore the topsoil and subgrade material to the proper density consistent with the surrounding fields. The area will be thoroughly cleaned and all debris removed. All restoration activities in agricultural fields will be done in accordance with NYSDAM guidelines.

Underground Electrical Collection System

The underground electrical collection system will be designed and installed such that the main conductors will have a minimum of 42 inches of cover and at least 48 inches of cover in agricultural lands). The design includes the installation of a warning tape and a tracer cable system to warn anyone who may be digging in the area both during plant operations and after decommissioning. The design is planned for safety by getting sufficient cover to ensure that they will not be disturbed during normal agricultural operations.

Cables will be cut back in the area of the pad mounts to minimum depth of 48 inches below grade in agricultural land, and a minimum of 36 inches below grade in all other areas. The remaining cabling may be removed for recovery of high- value copper and aluminum conductor material or left in place.

Roadways/Rigging Pads

After completion of decommissioning activities at each turbine site and access road, rigging pad removal shall commence. Gravel will be removed from road and rigging pad surfaces and transported from the site to an approved disposal location. The disposal location will be approved by the appropriate governing authority prior to the start of the decommissioning program. Geo-textile fabric (a tightly woven separation fabric placed during construction on the subgrade under the gravel to keep the gravel from being pushed down into the subgrade during wet periods) will be recovered and hauled off site to an appropriate disposal site. All drainage structures, including culverts, rip-rap, etc., will be removed, hauled off-site to an appropriate disposal site, and these areas will then be backfilled with clean, compatible sub-grade material. All road and other areas compacted during original construction or by equipment used in the decommissioning shall be tilled in a manner adequate to restore the subgrade material to the proper density and depth consistent with the surrounding fields. Low areas will be filled with clean, compatible subgrade material. After proper subgrade depth is established, topsoil will be placed to a depth, density, and finished contour consistent with the surrounding field. All restoration activities in agricultural fields will be done in accordance with NYSDAM guidelines.

Access security gates will be maintained at all times until the road removal process is complete and the area is ready to be demobilized. The gate shall be removed and all materials recycled to the greatest extent possible. The ditch crossing will be removed if requested by the landowner and approved by the appropriate authorities having jurisdiction over roads and drainage. The area will be thoroughly cleaned and all debris will be removed.

All decommissioning activities shall be performed in accordance with all applicable federal, state, and local requirements in effect at the time of decommissioning.

Financial Security for Decommissioning Costs

As detailed below, the costs of decommissioning Project components, average salvage values for various components, and a net decommissioning cost per turbine have been carefully estimated by LVI Services, the nation's largest remediation and facility services firm. In accordance with the Town of Villenova Wind Law, Ball Hill will establish financial security in a form and amount acceptable to the Town. The net decommissioning costs based on average salvage values and projected labor rates, updated to 2016 at rates provided by LVI, are estimated to be \$22,705.83 per wind energy conversion system (WECS).

Updating of Decommissioning Costs

Applicant will review and revise all estimated Decommissioning Costs on or before each 5-year anniversary of the Project's first date of commercial operations, and notify the Town of Villenova of any changes. The details of the timing and nature of the updated calculations will be included in the Host Community Agreement between the Applicant and the Town.

Revegetation and Reseeding

All Project areas not under cultivation or reserved for some other use by property owners will be revegetated or reseeded, as appropriate. Revegetation of the disturbed areas will be part of the restoration of the area to surrounding land use in the same manner as described for restoring areas temporarily impacted during construction. Reseeding in agricultural areas will be conducted in accordance with NYSDAM guidelines.

Table 12: Budgetary Estimate/Opinion of Cost for Ball Hill Wind Energy Conversion Facility Decommissioning

(prepared by LVI Environmental Services, Inc., 7/13/08 and adjusted per LVI for 2016)

Turbine Equipment Removal

Remove Blades/Hub					
Item	Quantity	Unit	Unit Cost	Extended	
Supervision	8	hour	93.50	748.00	
Crane w/ Operator	1	day	3,190.	3,190.00	
Operators	16	hour	88.00	1,408.00	
Labor	8	hour	71.50	572.00	
Support Equipment*	1	day	990.00	990.00	
Consumables/Fuel	8	hour	176.00	1,408.00	
Concrete/Clean Fill Recycling	0	ton	7.70	0.00	
C&D Waste Disposal	25	ton	71.50	1,787.50	
Steel Salvage	0	ton	(220.00)	0.00	
Aluminum Cable Salvage	0	pound	(0.45)	0.00	
Copper Cable Salvage	0	pound	(2.38)	0.00	
Component Salvage	0	each	0.00	0.00	
Sub Total				10,103.50	10,103.50

*Support Equipment consists of one (1) 100K Lb. excavator with attachments, one (1) loader, one (1) skidsteer, one (1) pickup truck and one (1) site trailer.

Remove Nacelle					
Item	Quantity	Unit	Unit Cost	Extended	
Supervision	4	hour	93.50	340.00	
Crane w/ Operator	1	day	3,190.00	3,190.00	
Operators	16	hour	88.00	1,408.00	
Labor	8	hour	71.50	572.00	
Support Equipment*	1	day	990.00	990.00	
Consumables/Fuel	8	hour	176.00	1,408.00	
Concrete/Clean Fill Recycling	0	ton	7.70	0.00	
C&D Waste Disposal	0	ton	65.00	0.00	
Steel Salvage	3	ton	(220.00)	0.00	
Aluminum Cable Salvage	150	pound	(0.45)	0.00	
Copper Cable Salvage	50	pound	(2.38)	0.00	
Component Salvage	1	each	(5,000.00)	(5,000.00)	
Sub Total				2,908.00	2,908.00

Dismantle Tower

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	8	hour	93.50	748.00	
Crane w/ Operator	2	day	3,190.	6,380.0	
Operators	32	hour	88.00	2,816.0	
Labor	32	hour	71.50	2,288.0	
Support Equipment*	2	day	990.00	1,980.0	
Consumables/Fuel	16	hour	176.00	2,816.0	
Concrete/Clean Fill Recycling	0	ton	7.70	0.00	
C&D Waste Disposal	0	ton	71.50	0.00	
Steel Salvage	138	ton	(220.00)	(30,360.00)	
Aluminum Cable Salvage	475	pound	(0.45)	(213.75)	
Copper Cable Salvage	130	pound	(2.38)	(309.40)	
Component Salvage		each		0.00	
Sub Total				(13,855.15)	(13,855.15)

Foundation Removal

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	8	hour	93.50	748.00	
Crane w/ Operator	0	day	3,190.	0.00	
Operators	32	hour	88.00	2,816.0	
Labor	0	hour	65.00	0.00	
Support Equipment*	2	day	990.00	1,980.0	
Consumables/Fuel	16	hour	176.00	2,816.0	
Concrete/Clean Fill Recycling	676	ton	7.70	5,205.2	
C&D Waste Disposal	0	ton	65.00	0.00	
Steel Salvage (Rebar)	6	ton	(190.00)	(1,140.00)	
Aluminum Cable Salvage	100	pound	(0.45)	(45.00)	
Copper Cable Salvage	30	pound	(2.38)	(71.40)	
Component Salvage	1	each	(250.0)	(250.00)	
Sub Total				12,058.80	12,058.80

Backfill/Restoration

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	8	hour	93.50	748.00	
Crane w/ Operator	0	day	3,190.	0.00	
Operators	16	hour	88.00	1,408.00	
Labor	8	hour	71.50	572.00	
Support Equipment*	1	day	990.0	990.00	
Consumables/Fuel	4	hour	176.0	704.00	
Topsoil	45	cubic yard	19.80	891.00	
Re-seed/Vegetation	470	square foot	0.22	1034.00	
Steel Salvage	0	ton	(220.00)	0.00	
Aluminum Cable Salvage	0	pound	(0.45)	0.00	
Copper Cable Salvage	0	pound	(2.38)	0.00	
Component Salvage	0	each		0.00	
Sub Total				6,347.00	6,347.00

TOTAL per Tower/Turbine	\$17,562
--------------------------------	-----------------

No. of Towers/Turbines	29
-------------------------------	-----------

TOTAL for Towers/Turbines	\$509,302
----------------------------------	------------------

Collection, Substation & Roads**Overhead Collection**

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	8	hour	93.50	748.00	
Crane w/ Operator	0	day	3,190.	0.00	
Operators	8	hour	88.00	704.00	
Labor	16	hour	71.50	1,144.00	
Support Equipment*	1	day	990.00	990.00	
Consumables/Fuel	8	hour	176.00	1,408.00	
Concrete/Clean Fill Recycling	0	ton	7.70	0.00	
C&D Waste Disposal	5	ton	71.50	357.50	
Steel Salvage	0	ton	(220.00)	0.00	
Aluminum Cable Salvage	20	pound	(0.45)	(9.00)	
Copper Cable Salvage	30	pound	(2.38)	(71.40)	
Component Salvage	0	each	0.00	0.00	
Sub Total				5271.10	5271.10

Underground Collection

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	160	hour	93.50	14,960.00	
Crane w/ Operator	0	day	3,190.00	0.00	
Operators	160	hour	88.00	14,080.00	
Labor	160	hour	71.50	11,440.00	
Support Equipment*	20	day	990.00	19,800.00	
Consumables/Fuel	160	hour	176.00	28,160.00	
Concrete/Clean Fill Recycling	0	ton	7.70	0.00	
C&D Waste Disposal	80	ton	71.50	5,720.00	
Steel Salvage	0	ton	(220.00)	0.00	
Aluminum Cable Salvage	186750	pound	(0.45)	(84,037.50)	
Copper Cable Salvage	13275	pound	(2.38)	(31,594.50)	
Component Salvage	0	each	0.00	0.00	
Sub Total				(21,472.00)	(21,472.00)

Substation

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	16	hour	93.50	1,496.00	
Crane w/ Operator	0	day	3,190.00	0.00	
Operators	32	hour	88.00	2,816.00	
Labor	16	hour	71.50	1,144.00	
Support Equipment*	2	day	990.00	1,980.00	
Consumables/Fuel	16	hour	176.00	2,816.00	
Concrete/Clean Fill Recycling	60	ton	7.70	462.00	
C&D Waste Disposal	10	ton	71.50	715.00	
Steel Salvage	5	ton	(220.00)	(1,100.00)	
Aluminum Cable Salvage	1000	pound	(0.45)	(450.00)	
Copper Cable Salvage	150	pound	(2.38)	(357.00)	
Component Salvage	1	each	(2,000.00)	(2,000.00)	
Sub Total				7,522.00	7,522.00

Roads

Item	Quantity	Unit	Unit Cost	Extended	
Supervision	144	hour	93.50	13,464.00	
Crane w/ Operator	0	day	3,190.	0.00	
Operators	288	hour	88.00	25,344.00	
Labor	144	hour	71.50	10,296.00	
Support Equipment*	18	day	990.00	17,820.00	
Consumables/Fuel	144	hour	176.00	25,344.00	
Concrete/Clean Fill Recycling	8100	ton	7.70	62,370.00	
C&D Waste Disposal	45	ton	71.50	3,217.50	
Steel Salvage	0	ton	(220.00)	0.00	
Aluminum Cable Salvage	0	pound	(0.45)	0.00	
Copper Cable Salvage	0	pound	(2.38)	0.00	
Component Salvage	0	each	0.00	0.00	
Sub Total				157,845.50	157,845.50

GRAND TOTAL **\$658,469**

Per WECS: \$22,705.83

11. Complaint Resolution

To provide good relations between the Applicant and the community, a system will be implemented for receiving and processing any complaints from residents that might arise concerning compliance with permits or approvals of the agreements between the Applicant and the Town, or Applicant's construction of the Project during its operation of the Project. Applicant will use reasonable efforts to resolve any such complaint.

Prior to the commencement of construction, Applicant will assign a Community Relations Coordinator to be responsible for resolving any complaints as described above.

In addition, Applicant will undertake a mailing to all residents of the Town notifying them of an email address, street address and local and toll-free telephone numbers where they can contact Applicant with any complaints, questions or concerns. During non-business hours, the toll-free telephone number will be equipped with an automatic answering and time and date recording device.

Applicant will make reasonable efforts to respond to all complaints within five (5) business days of receipt of any complaint. Applicant will maintain records and provide periodic reports to the Town Board of any complaints received and responses, resolutions, and attempts to resolve such complaints for turbines or activities in the Town of Villenova.

If any complaint is not resolved within thirty (30) days of its receipt, to the reasonable satisfaction of the complaining resident, such complaint may be noticed at the next Town Board meeting for discussion and guidance as the Board may determine appropriate consistent with applicable laws and agreements.

12. Construction Schedule and Description of Delivery Vehicles and Routes

- (a) Figure 7 shows the construction schedule for the Project.
- (b) In 2008, ESS Group conducted a Transportation Haul Route Study to identify potential routes for delivery of turbine components and construction materials as well as impacts to highway transportation and this report was included in the 2008 DEIS. Since the Project Area remains generally unchanged since 2008 (as does much of the road network to be utilized to deliver wind turbine components and construction materials and equipment to the various Project Sites), in 2015, a preliminary transportation site survey updating the 2008 ESS Group study was presented in the SDEIS (See SDEIS § 2.11 and Appendix D). In the SDEIS, the Applicant provided a preliminary site survey of the Project prepared by American Transport, Inc. to evaluate the transport of wind turbine components and construction materials to and within the Project Area. Again, since the Project Area remains generally unchanged as does the road network studied and to be utilized, it is anticipated that the same delivery vehicles and routes (or substantially similar vehicles and routes) will be utilized for construction of the revised layout contained in this Amended Application as was presented in the SDEIS. Figure 8 and 9 show potential off-site and on-site haul route roadways to be utilized during construction of the Project as presented in the SDEIS.

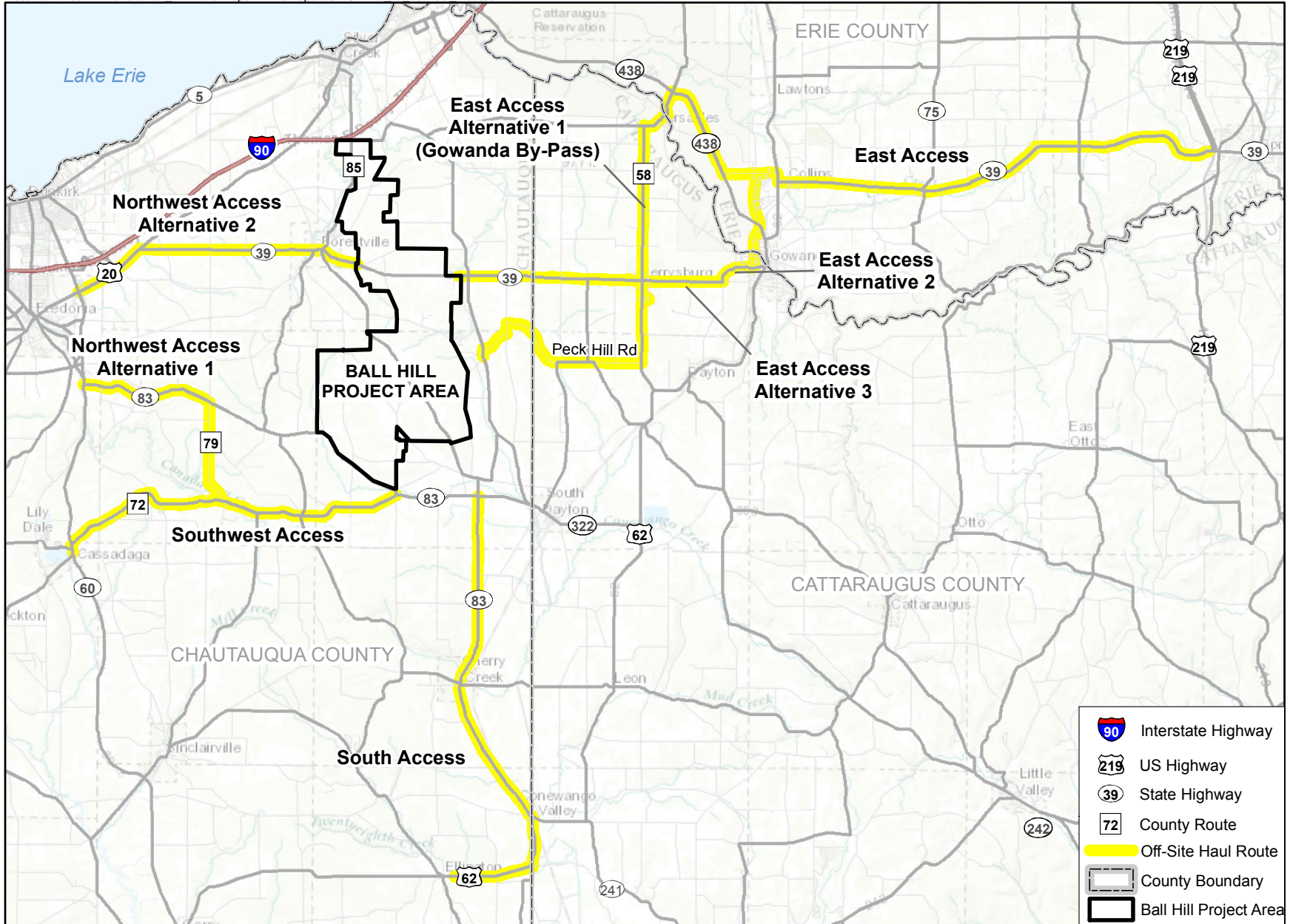
In the 2008 DEIS, the Transportation Haul Route Study (See 2008 DEIS Appendix N) included a detailed discussion of the particular delivery vehicles to be used to deliver the wind turbine components to the Project Area and various Project Sites. Tables 13 through 15 show the types of truck as presented in the 2008 DEIS (Appendix N). The turbine manufacturer under the current Project (Vestas) is in the process of developing a site-specific transportation plan. The turbines are slightly larger in size (87 meter hub height versus the 80 meter hub-height presented in the DEIS); however there are less turbines (29 versus 60 presented in the DEIS). It is anticipated that the tower will be delivered in three sections as studied in the DEIS. Therefore, this data is presented with the intention of providing a preliminary assessment of the types and sizes of trucks needed for construction of the Project. The vehicle configurations are illustrated on the attached pictures taken from the transportation study developed by Siemens from the 2012 Project layout (Figure 10 [5 pages]). It is anticipated that similar vehicles will be utilized during construction of the Project and updated information will be provided to the Town in the FEIS as a site-specific transportation plan designed and produced by Vestas.

Table 13: OS/OW Truck Configurations [Table 1 from Appendix N of the 2008 DEIS]						
Wind Turbine Part	Gross Wt (lbs.)	Transport Vehicle (configurations may vary)	Length	Height	Width	Turning Radius
80m Tower Base	212,000*	11-Axle Double Schnabel	158'9"	15'-0"	14'-2"	80'-5"
80m Tower Mid-Section	132,000	7-Axle Double Schnabel	128'-2"	15'-0"	n/a	80'-5"
80m Tower Top	112,000	6-Axle Expandable Flatbed	123'-7"	14'-6"	n/a	74'-6"
Nacelle	197,000	11-Axle Lowboy	112'-10"	14'-8"	n/a	111'-2"
37m Blade	<7,000	5-Axle Expandable Flatbed	143'-11"	13'-6"	n/a	120'-0"
Substation Transformer	165,960	19-Axle with jeep assembly	192'-2"*	18'-5.5"*	12'-3"	80'-0"
Hub Assembly	75,000	5-Axle Double Drop	78'-0"	13'-8"	10'-5"	48'-4"
<p>** SUPERLOAD (PERM12S required by NYSDOT for any vehicle or combination of vehicles which exceed 16 feet in width; or 16 feet in height or greater; or greater than 160 feet in length, or 200,000 lbs. or greater in GVW; or a combination of any of the above.</p> <p>** Requires special adjustments to overhead utility lines.</p>						

Table 14: Estimated Special Hauling Permit Vehicle Truck Trips [Table 3 from Appendix N of the 2008 DEIS]					
Wind Turbine Component	No. each Turbine/Crane	Ball Hill Project	No. Vehicles Required	No. Single Trips	No. Round Trips*
80m Tower Base	1	60	60	60	120
80m Tower Mid-Section	1	60	60	60	120
80m Tower Top	1	60	60	60	120
Nacelle	1	60	60	60	120
37m Blade	3	180	90	90	180
Hub Assembly	1	60	60	60	120
Substation Transformer	2	2	2	2	4
500-ton Crane	1	1	19	19	38
TOTAL:	11	483	411 (min.)	411 (min.)	822
* All trucks on empty on the return trip except the crane trucks. Some trailer lengths can be shorted upon leaving the project area.					

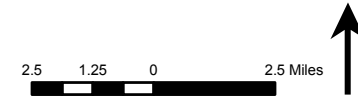
Table 15: Estimated Gravel & Cement Truck Trips [Table 4 from Appendix N of the 2008 DEIS]					
Proposed Construction Activity	Quantity	Total Volume (CY)	No. Vehicles Required (range)*	No. Single Trips **	No. Round Trips **
Gravel for temporary Turbine Access Roads (35' wide x 8" depth)	16.0 miles	76,700	5,478 – 6,391	6,391	12,782
Gravel removal for permanent Turbine Access Road (16' wide x 8" depth)	16.0 miles	37,650	2,700 – 3,750	3,750	7,500
Unsuitable soil Removal – Roads & Foundations (approx..)	Varies	5,000	358 – 417	417	834
Cement for Turbine Foundations (304 CY each)	60 foundations	18,240	1,520 – 1,824	1,824	3,648
	TOTAL:	137,590	10,056 – 12,382	12,382	24,764
* Range is 14 CY – 12 CY for each gravel load and 12 CY – 10 CY for each cement load.					
** Trip estimates based on the higher range (i.e., small truck loads).					

ID	Task Name	Duration	Start	Finish	Predecessors	Sep '16	Oct '16	Nov '16	Dec '16	Jan '17	Feb '17	Mar '17	Apr '17	May '17	Jun '17	Jul '17	Aug '17	Sep '17	Oct '17	Nov '17	Dec '17	Jan '18	Feb '18	Mar '18	Apr '18	May '18	Jun '18	Jul '18	Aug '18	Sep '18
33	COD	0 days	Fri 1/1/16	Fri 1/1/16																										



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Figure 8
**Potential Off-Site Haul Route Roadways
 To be Utilized During Construction**
 Chautauqua County, New York
 Ball Hill Wind Energy, LLC



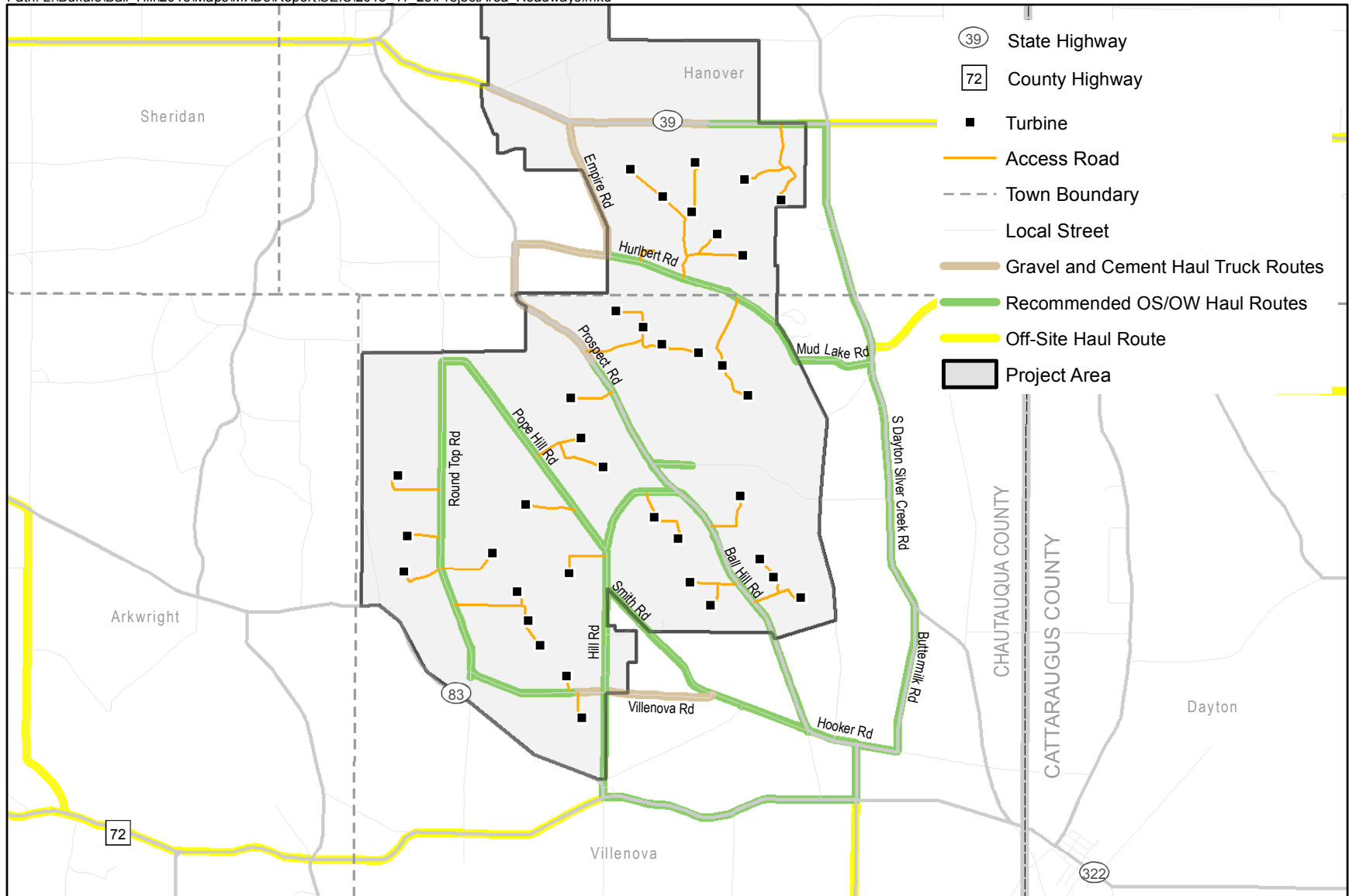


Figure 9
Potential Project Area Roadways to be Utilized during Construction
Ball Hill Wind Project
Chautauqua County, New York
Ball Hill Wind Energy, LLC

0 0.25 0.5 1 Miles




Figure 10: Representative Drawings for OS/OW Vehicles - Page 1 of 5

Nacelle Weights and Dimensions:

ATS SPECIALIZED, INC.
 725 Opportunity Drive
 St. Cloud, MN 56301
 800-328-2316
 Fax 320-258-2836

REQUEST FOR SPECIAL HAULING PERMIT



Commodity: NACELLE

Dimensions of Load

Length	36-6
Width	11-6
Height	12-4
Weight	193000

Overall Dimensions

Length	193-0
Width	11-11
Height	15-6
Weight	378000

Axle Spacings

1-2	17-0
2-3	5-1
3-4	5-1
4-5	16-3
5-6	5-0
6-7	5-0
7-8	14-8
8-9	5-0
9-10	5-0
10-11	53-0
11-12	5-0
12-13	5-0
13-14	14-7
14-15	5-0
15-16	5-0
16-17	14-8
17-18	5-0
18-19	5-0

Axle Weights

Axle 1	18
Axle 2	20
Axle 3	20
Axle 4	20
Axle 5	20
Axle 6	20
Axle 7	20
Axle 8	20
Axle 9	20
Axle 10	20
Axle 11	20
Axle 12	20
Axle 13	20
Axle 14	20
Axle 15	20
Axle 16	20
Axle 17	20
Axle 18	20
Axle 19	20

Tire Sizes
 Steer Tires: 38565R225
 All Others: 27570R225


Representative Drawings

Figure 10: Representative Drawings for OS/OW Vehicles - Page 2 of 5

Base Weights and Dimensions:

ATS SPECIALIZED, INC.
 725 Opportunity Drive
 St. Cloud, MN 56301
 800-328-2316
 Fax 320-258-2836

REQUEST FOR SPECIAL HAULING PERMIT



Commodity: BASE

Length	54-2
Width	14-9
Height	13-0
Weight	127537

Length	160-0
Width	14-10
Height	15-6
Weight	240000

1-2	14-6
2-3	4-6
3-4	4-6
4-5	15-4
5-6	5-0
6-7	5-0
7-8	67-8
8-9	5-0
9-10	5-0
10-11	14-7
11-12	5-0
12-13	5-0

Axle 1	18
Axle 2	19
Axle 3	19
Axle 4	19
Axle 5	18
Axle 6	18
Axle 7	18
Axle 8	18
Axle 9	18
Axle 10	18
Axle 11	18
Axle 12	18
Axle 13	18

Tire Sizes
 Steer Tires: 38565R225
 All Others: 29575R22.5

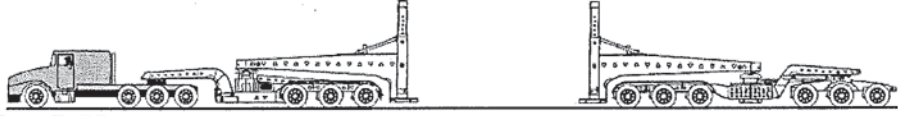
Representative Drawings

Figure 10: Representative Drawings for OS/OW Vehicles - Page 3 of 5

Mid Weights and Dimensions:

ATS SPECIALIZED, INC.
725 Opportunity Drive
St. Cloud, MN 56301
800-328-2316
Fax 320-258-2836

REQUEST FOR SPECIAL HAULING PERMIT



Commodity: MID

Length	85-6
Width	13-0
Height	13-0
Weight	127207

Length	190-0
Width	13-0
Height	14-6
Weight	243000

1-2	14-4
2-3	4-7
3-4	4-6
4-5	15-4
5-6	5-0
6-7	5-0
7-8	102-0
8-9	5-0
9-10	5-0
10-11	14-7
11-12	5-0
12-13	5-0

Axle 1	17
Axle 2	19
Axle 3	19
Axle 4	19
Axle 5	19
Axle 6	18
Axle 7	19
Axle 8	18
Axle 9	18
Axle 10	18
Axle 11	18
Axle 12	18
Axle 13	18

Tire Sizes
Steer Tires: 38565R225
All Others: 29575R225

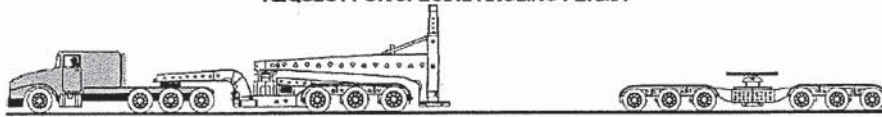
Representative Drawings

Figure 10: Representative Drawings for OS/OW Vehicles - Page 4 of 5

Top Weights and Dimensions:

ATS SPECIALIZED, INC.
 725 Opportunity Drive
 St. Cloud, MN 56301
 800-328-2316
 Fax 320-258-2836

REQUEST FOR SPECIAL HAULING PERMIT



Commodity: TOP

Dimensions of Load

Length	118-1
Width	13-0
Height	7-10
Weight	106351

Overall Dimensions

Length	199-0
Width	13-0
Height	14-6
Weight	212000

Axle Spacings

1-2	14-4
2-3	4-7
3-4	4-6
4-5	15-4
5-6	5-0
6-7	5-0
7-8	103-0
8-9	5-0
9-10	5-0
10-11	14-7
11-12	5-0
12-13	5-0

Axle Weights

Axle 1	16
Axle 2	18
Axle 3	18
Axle 4	18
Axle 5	16
Axle 6	16
Axle 7	16
Axle 8	15
Axle 9	15
Axle 10	15
Axle 11	16
Axle 12	16
Axle 13	16

Tire Sizes
 Steer Tires: 38565R225
 All Others: 23575R17.5

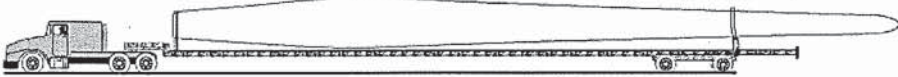
Representative Drawings

Figure 10: Representative Drawings for OS/OW Vehicles - Page 5 of 5

Blade Weights and Dimensions:

ATS SPECIALIZED, INC.
725 Opportunity Drive
St. Cloud, MN 56301
800-328-2318
Fax 320-258-2836

REQUEST FOR SPECIAL HAULING PERMIT



Commodity: B53 BLADE

Length	172-7
Width	10-6
Height	11-1
Weight	25132

Length	197-0
Width	10-10
Height	14-11
Weight	80000

1-2	20-5
2-3	4-4
3-4	112-3
4-5	10-1

Axle 1	12
Axle 2	17
Axle 3	17
Axle 4	17
Axle 5	17

Tire Sizes
Steer Tires:
All Others:

Representative Drawings

13. Environmental Assessment Form (EAF)

Noble submitted a full environmental assessment form (“Full EAF”) as part of their initial application to the Town of Villenova, a copy of which is attached hereto as Appendix F. By Resolution dated October 28, 2015 the Board resolved to continue the development of the Project, that Ball Hill Wind Energy, LLC shall be recognized by the Board as Applicant, and ordered preparation of a SDEIS addressing a range of impacts related to the implementation of new turbine technology, the modification of the prior project layout and the passage of time. A copy of the resolution is attached hereto as Appendix F.

14. Wind Measurement Tower Applications

The Amended Application does not include a request for a Special Use Permit for Wind Measurement Towers.

15. WECS Specifications and Material Safety Data Sheet

- (a) Specifications on the WECS are presented in the **Vestas 126, 3.45 MW Series Wind Turbine Brochure** attached hereto as Appendix A. Specifications on sound levels are presented in Section 17d of this Amended Application.
- (b) Figure 6 (see Section 6 of this Amended Application) shows the vertical drawing of the WECS.
- (c) Material Safety Data Sheets are attached electronically to this Application as Appendix G.

16. Declaration of Environmental Significance

The Town Board, as SEQRA Lead Agency, determined through the SEQRA review of the 2008 Noble Application that the Project may have one or more significant adverse environmental impacts and, with the consent of Noble, issued a positive declaration of environmental significance under SEQRA. A DEIS was submitted to and accepted by the Town Board in 2008. In 2015, the Town Board confirmed the positive declaration and ordered a SDEIS to be prepared by the Applicant. On January 27, 2016, the Town Board accepted the SDEIS as complete for purposes of commencing public review.

17. Draft Environmental Impact Statement (DEIS) Submittal Information

For the SDEIS, the Applicant submitted studies or analysis of all relevant impacts identified by the Board in its resolution dated October 25, 2015 ordering the preparation of the SDEIS, which was accepted as complete by the Town Board on January 27, 2016. As a result of the Applicant's revised layout set forth in this Amended Application, the following documents have been updated and are attached or are in the process of being updated and will be submitted with the FEIS¹:

- 17a/b: Updated Shadow Flicker and Visual Resource Assessment prepared by Saratoga Associates (attached to this Amended Application as Appendix H).
- 17c: A fire protection and emergency response plan prepared by RES Group (attached to this Amended Application as Appendix I).
- 17d: Noise Analysis prepared by Epsilon Associates (attached to this Amended Application as Appendix J).
- 17e: Property Valuation study prepared by IREM Solutions (attached to this Amended Application as Appendix K).
- 17f: Communication Surveys prepared by Capitol Airspace (provided in the SDEIS and to be updated and provided in FEIS).
- 17g: Wetland and Waterbodies report prepared by Fisher Associates (to be updated and provided in FEIS).
- 17h: Cultural Resources reports (Architecture and Archeology) prepared by Panamerican Consultants (to be updated and provided in FEIS).

¹ A summary of each report attached hereto is provided.

17a/b: Shadow Flicker and Visual Resource Assessment

The Visual Resource Assessment included as Appendix H has been revised and updated to address potential impacts to visual resources and includes an updated shadow flicker study.

Summary: An updated Visual Resources Assessment (VRA) has been prepared to evaluate the visual impact of the Project at particular locations, including residences, and in the surrounding area, both on its own and cumulatively with other proposed wind energy projects. The VRA was prepared according to New York State Department of Environmental Conservation Program Policy “Assessing and Mitigating Visual Impacts” (NYSDEC 2000) (DEC Visual Policy) and SEQRA criteria to minimize impacts on visual resources.

The VRA includes shadow flicker analysis, in addition to viewshed mapping, photographic simulations, and other visual impact analysis. Evidence from operational turbines suggests that the intensity of shadow flicker is only an issue at short distances. Shadow flicker is typically not found to occur at distances greater than ten rotor diameters from a wind turbine. Beyond ten rotor diameters, a person should not perceive a wind turbine to be chopping through sunlight, but rather as an object with the sun behind it. The analysis identified 241 receptors within 4,134-feet (or approximately ten rotor diameters) of any turbines, and calculated the number of hours per year each inventoried structure would theoretically fall within the shadow zone of one or more proposed turbines:

- 57 (23.6%) will theoretically not be impacted;
- 18 (7.5%) will theoretically be impacted 0-2 hrs/yr;
- 69 (28.6%) will theoretically be impacted 2-10 hrs/yr;
- 43 (17.8%) will theoretically be impacted 10-20 hrs/yr;
- 32 (13.3%) will theoretically be impacted 20-30 hrs/yr;
- 17 (7.1%) will theoretically be impacted 30-40 hrs/yr; and
- 5 (2.1%) will theoretically be impacted 40+ hrs/yr.

As described in a memo included with this Amended Application, Saratoga revisited the shadow flicker analysis after the locations of two turbines were moved. It was found that the micrositing of the two turbines would have only a minor impact on shadow flicker hours at up to 6 receptors; no significant increases would occur at any receptors.

There are no regulations or guidelines that establish an acceptable degree of shadow flicker impact on a potential receptor. Industry standard utilizes a 30-hour per year threshold that identifies residences where mitigation may be appropriate. The number of receptors theoretically impacted for 30 hours or more has increased from 8 receptors based on the project layout presented in the SDEIS to 22 receptors under the revised layout.

17c: Fire Protection and Emergency Response Plan

A fire protection and emergency response plan template was provided in the SDEIS. As stated in the SDEIS, the Applicant will coordinate all fire protection and emergency response plans with local providers of such services. RES places the highest priority on safety and health procedures at its project sites, and will fully complete an Emergency Response Plan for the Ball Hill Project. A working draft for this Plan is attached as Appendix I to this Amended Application. These materials will be provided to all fire departments and emergency responders servicing the Project.

In March 2016, the Applicant met with the following local fire officials from the fire districts serving the Project area to provide an introduction to the Project:

Silver Creek Volunteer Fire Department: Jim Tytka
Forestville Volunteer Fire Department: Kyle Barthel
Hanover Hose Col: Steve D'Angelo

17d: Noise Analysis

The updated noise analysis for the Project is included as Appendix J.

Summary: A comprehensive sound level assessment conducted for the revised Project layout indicates that predicted sound level impacts from the 29 proposed Vestas V126-3.45 wind turbine generators and two proposed electrical transformers are expected to meet the Town of Hanover and Town of Villenova noise limit at each of the closest structures to the Project. Due to the nature of wind turbine noise and the relative background sound levels in the area, noise from the Project is likely to be audible at times at some of the closest residences, but the Project is anticipated to meet the suggested criteria recommended in the NYSDEC guidance document for avoiding the potential for adverse community noise impacts. No pure tones (such as whines, screeches, or hums) were identified at the closest structure for the turbine model under consideration. Low frequency sound levels at the closest structures to the Project are also predicted to be well below the recommended criteria to avoid disturbance, vibration, and rattle indoors.

17e: Property Valuation Study

The updated property valuation study for the Project is included as Appendix K:

Summary: Based on analysis of sales data within an approximate five square mile area surrounding four existing wind farms located throughout New York State, the study finds no conclusive evidence which would indicate any impact or potential impact on residential real estate values in the market area analyzed due to being in close proximity or in the viewshed of an operational wind farm. The study indicates that this conclusion is in concert with much of the quantitative research available today on wind farm development effects on property value. The study notes that while it is impossible to definitively say that there will be no effect on any property's value, it is apparent from studying similar areas where wind farms have been developed that no broad based value effects have occurred in those markets.

17f: Communication Surveys

Communication surveys with respect to AM and FM Radio, Off-Air TV Analysis, Licensed Microwave, and Land Mobile and Emergency Services were submitted to the Town as Appendix P in the SDEIS for the Ball Hill Wind Project (January 2016). Below provides a summary of the impacts presented in the SDEIS. The communication surveys will be updated and provided in the FEIS. Impacts to communications are expected to be minimal and very similar to the results presented in the SDEIS.

Although construction cranes are roughly 75 feet higher than the tower hub height, they are considerably lower than the maximum tip height of the completed turbines. The construction cranes move around the Project Site during construction and do not remain in the same location for a long period of time and are typically only fully raised when installing a turbine at its permitted location. In the case of unexpected interference, any interference would be minimal and temporary. Therefore, impacts from construction of the Project would not result in significant adverse impacts on communication signals in the Project Area.

The full power digital stations (WNYB, WBBZ-TV, WKBW-TV, WIVB-TV, WGRZ, WNYO-TV, WUTV, WNLO, and WNED-TV) may have disruption in reception in and around the Project. The areas primarily affected would include TV service locations within 10 km of the Project and that have clear line-of-sight to a proposed wind turbine but not the respective station. Communities and homes located in these areas may have degraded reception of the following stations: WNYB, Channel 26. This is due to the multipath interference caused by signal scattering as TV signals are reflected by the rotating wind turbine blade and mast. Mitigation of these potential impacts is discussed in Section 2.10.3, Mitigation.

There are 12 FM stations within 30 km of the center of the Project Area. All of the FM stations are located at distances greater than 9.01 km (5.59 miles) from the nearest turbine. At these distances, the wind turbine effects on the FM coverage for all of these stations will be very minimal to non-existent. No problems are expected for the coverage of the full-power and medium-power FM stations near the Project Area because the separation distances from the proposed wind turbines are so great. Audio signals from AM broadcast can interact with wind turbines at close range (1 to 3 km [0.62 to 1.86 miles]). However, the two AM transmitters (same station) were approximately 10 miles from the center of the Project Area.

The frequencies of operation of land-mobile radio repeaters are generally unaffected by the presence of wind turbines. Very little, if any, change in the coverage of the repeaters will occur when the wind turbines are installed. Each land-mobile radio/emergency service network is designed to operate reliably in a non-line-of-site environment. Many of the systems are designed with multiple base transmitter stations covering a large geographic area with overlap between the adjacent sites in order to provide handoff between cells. Any signal blockage caused by the Project does not materially degrade the reception because the end user is likely to receive signals from multiple transmitter locations. In addition, the frequencies of operation for these services have characteristics that allow the signal to propagate through the Project.

Telephone communications in the cellular and personal communication system (PCS) frequency bands are unaffected by the presence of wind turbines. This is not only because of the frequencies used, but because cell communications are designed to function as a system, passing the signal to a different cell if it is weakened at the first. Cellular and PCS frequency bands are unaffected by the presence of wind turbines because the blockage caused by wind turbines is not destructive to the propagation of signals in these frequency bands. Local obstacles are also generally not a limiting factor for cellular communication frequencies because other cellular sites provide an alternative signal.

17g: Wetland and Waterbodies report

An updated Wetland and Waterbodies Report for the Project will be provided as part of the FEIS.

17h: Cultural Resources reports (Architecture and Archeology)

Updated report and/or memos on cultural resources will be provided as part of the FEIS.

18. Tower Design Information

The following certification is submitted as tower design information for the WECS.

TYPE CERTIFICATE

Certificate No.: TC-DNV-DSS-904-00337-0 (TC-230906-A-3) Issued: 2015-09-17 Valid until: 2019-10-30

Issued for:

Vestas V126-3.3 MW / V126-3.45 MW

Specified in Annex 1

Issued to:

Vestas Wind Systems A/S

Hedeager 42
8200 Aarhus N
Denmark

According to:

IEC 61400-22:2010 Wind turbines – Part 22: Conformity Testing and Certification, BEK 73: 2013 "Bekendtgørelse om teknisk certificeringsordning for vindmøller" and DNV-DSS-904:2014-01 Type Certification of Wind Turbines

Based on the documents:

DB-DNV-DSS-904-00772-0 (DB-230906-A-3)	Design Basis Conformity Statement, dated 2015-09-17
DE-DNV-DSS-904-00774-0 (DE-230906-A-4)	Design Evaluation Conformity Statement, dated 2015-09-17
TT-DNV-DSS-904-00775-0 (TT-230906-A-3)	Type Test Conformity Statement, dated 2015-09-17
ME-DNV-DSS-904-00776-0 (MC-230906-A-3)	Manufacturing Evaluation Conformity Statement, dated 2015-09-17
TCM-DNV-DSS-904-00777-0 (TM-230906-A-3)	Type Characteristics Measurements Conformity Statement, dated 2015-09-17
FER-TC-DNV-DSS-904-00337-0 (PD-2309-18CGY6P-36, Rev 4)	Final Evaluation Report, dated 2015-09-17

Changes of the system design, the production and erection or the manufacturer's quality system are to be approved by DNV GL.

Hellerup, 2015-09-17

For the accredited certification body
Germanischer Lloyd Industrial Services GmbH



Christer Eriksson
Service Line Leader Type Certification



By DAkkS according DIN EN IEC/ISO 17065 accredited Certification Body for products. The accreditation is valid for the fields of certification listed in the certificate.

Hellerup, 2015-09-17

For the accredited certification body
Germanischer Lloyd Industrial Services GmbH



Niels Dam Lerke
Project Manager

The latest edition of the "General Terms & Conditions of Germanischer Lloyd Industrial Services GmbH" is applicable. German law applies.
Germanischer Lloyd Industrial Services GmbH, Brooktorkai 1B, 20457 Hamburg, Germany

TYPE CERTIFICATE - ANNEX 1

Certificate No.: TC-DNV-DSS-904-00337-0 (TC-230906-A-3)

Page 2 of 5

Wind turbine type certification

Basic standard
IEC WT class

IEC 61400-1 ed. 3 + A1
IEC IIIA and IEC IIIB (except
for temperature ranges) –
V126-3.3 MW
IEC S – V126-3.45 MW

General

Power regulation
Rotor orientation
Rotor tilt
Cone angle
Rated power
Rated wind speed v_r
Rotor diameter
Hub height(s)

pitch-controlled
upwind
6°
4°
3300 kW / 3450 kW
10.70 m/s
126m
117m (T3E160 – IEC IIIB/S)
137m (LDST – IEC IIIA/S)
87m (T3E155 – IEC IIIA/S)
3 -22.5 m/s (117m and 137m)
3 -20 m/s (87m)
20 years
13.08.56

Hub height operating wind speed range v_{in} - v_{out}

Design life time
Software version

Wind conditions

Mean turbulence intensity I_{ref} at $v_{hub} = 15$ m/s
Annual average wind speed at hub height v_{ave}
Reference wind speed v_{ref}
Mean flow inclination

IEC IIIA	IEC IIIB	IEC S
0.16	0.14	0.16/0.14
7.5 m/s	7.5 m/s	6.9 m/s
37.5 m/s	37.5 m/s	37.5 m/s
8°	8°	8°

Electrical network conditions

Normal supply voltage and range

Normal supply frequency and range
Voltage imbalance
Maximum duration of electrical power network outages
Number of electrical network outages

3 x 650 V
10.5-35 kV \pm 10 %
50 or 60 Hz \pm 6 %
IEC 61000-3-6 TR max 2 %
Two 3 months periods
Max 52 per year

Other environmental conditions

Air density

1.225 / 1.325¹ kg/m³
¹To account for low
temperature operation, Vestas
has applied higher air density
for the following load cases:
1.2, 2.1, 3.1, 4.1 and 5.1
Normal: -20 °C to +45 °C*
Extreme: -40 °C to +50 °C
Normal: -30 °C to +45 °C*
Extreme: -40 °C to +50 °C
(*de-rating strategy above +30
°C for V126-3.3MW

Standard temperature range

Low temperature range

*de-rating strategy above +25
°C for V126-3.45MW)
100% (max 40% of time) and
90% (rest of life time)
1000 W/m²
ISO 9223: Airborne salinity S3

Relative humidity of the air

Solar radiation
Salinity

TYPE CERTIFICATE - ANNEX 1

Certificate No.: TC-DNV-DSS-904-00337-0 (TC-230906-A-3)

Page 3 of 5

Description of lightning protection system

Designed acc. to IEC 61400-24,
Protection Level 1 and IEC
61312-1

Major components

Blade	Type Manufacturer Material Blade length Air brake Number of blades Drawing / Data sheet / Part no.	Infused structural air foil shell Vestas Carbon fibres pultrusions, glass fibre fabrics, balsa and PET foam core 61.65 m Full span blade feather 3 Drawing No : 0028-7875 Drawing No : 0046-1000 - V126 STE kit
Hub	Type Material Drawing / Data sheet / Part no.	Cast ball shell hub EN GJS-400-18U-LT 085210
Blade bearing	Type Manufacturer Drawing / Data sheet / Part no.	Double row four-point contact ball bearing Laulagun F2840M00DST0125VW
Pitch System	Type Hydraulic/Electrical unit Actuators	Hydraulic power unit PMC Technology A/S LJM, Glual or Parker
Main shaft	Type Material Drawing / Data sheet / Part no.	Cast hollow shaft EN GJS-400-18U-LT 085196 / 29024367
Main bearing	Type Manufacturer Drawing / Data sheet / Part no. Manufacturer Drawing / Data sheet / Part no.	Double-row spherical roller bearing SKF 240/950 CA/C3LW 33VQ113 FAG Schaeffler 240/950 F-582562.PRL.WPOS
Gearbox	Type Manufacturer Gear Ratio Drawing / Data sheet / Part no. Type Manufacturer Gear Ratio Drawing / Data sheet / Part no.	2 Planetary stages and one helical stage Winergy 112.6 PZAB3530.1 2 Planetary stages and one helical stage ZF 112.8 EH921A
Couplings	Main shaft-Main gear Manufacturer Type	Shrink disc Tollok TLK622 990x1350

TYPE CERTIFICATE - ANNEX 1

Certificate No.: TC-DNV-DSS-904-00337-0 (TC-230906-A-3)

Page 4 of 5

	Main gear-Generator Manufacturer Type	Flexible composite coupling KTR Kupplungstechnik GmbH RADEX-N 2200kpl.m.Lamellenp
Machine foundation	Type Material Drawing / Data sheet / Part no.	Cast EN GJS-400-18U-LT 29006988
Yaw system	Drive type Yaw bearing type Yaw drive type Yaw brake type Yaw speed	Nacelle mounted electrical driven plain bearing with external toothing Friction bearing, permanently pre-tensioned Liebherr type DAT350/1492- 4000 Comer type PG 1603 Bonfiglioli type 709T4U Electrical disc brake in yaw motors 0.46 °/s
Mechanical brakes	Manufacturer Type Location Brake torque	Eurotubi / Vestas Disc brake High speed shaft of gearbox Min. 17.4 kNm (static)
Generator	Manufacturer Type Rated power Voltage Nominal Speed Insulation class Protection class (acc. to IEC 529) Manufacturer Type Rated voltage Rated power Rated current Cos phi Rated speed Protection class (acc. to IEC 529) Rated frequency Insulation class Manufacturer Type Nominal power Voltage Nominal Speed Insulation class Protection class (acc. to IEC 529)	Siemens (not valid for V126- 3.45MW) Three phase induction generator with squirrel cage rotor - JGWA-560LM-06A 3500kW 750 V 1450 rpm F IP54 Siemens Three phase induction generator with squirrel cage rotor - JGWA-560LM-06A 750 V 3650 kW 3440 A 0.82 1450 rpm IP54 72.2 Hz F VND Three phase induction generator with squirrel cage rotor - DASG 560/6M 3650 kW 750 V 1450 rpm H IP54

TYPE CERTIFICATE - ANNEX 1

Certificate No.: TC-DNV-DSS-904-00337-0 (TC-230906-A-3)

Page 5 of 5

	Manufacturer	VND SFIG_V2
	Type	Three phase induction generator with squirrel cage rotor - DASG 560/6M
	Rated power	3650 kW
	Rated voltage	750 V
	Rated frequency	72.5 Hz
	Rated power factor (VFD) – Cos phi	0.87
	Insulation class stator	H
	Protection class (acc. to IEC 529)	IP54
	Rated speed	1450 rpm
	Rated stator current	3230 A
Transformer	Manufacturer	SGB / Siemens
	Type	Dry-type transformer
	Nominal power	3750 kVA
	Environmental Tests	E2 according to IEC 60076-11
	Climatic Tests	C2 according to IEC 60076-11
Protection system	Description	Configurable safety system based on safety relays
Tower	Type	Tubular steel tower
	Hub height	117m
	Drawing / Data sheet / Part no.	0038-9831.V01
	Type	Tubular steel tower
	Hub height	87m
	Drawing / Data sheet / Part no.	0050-2668.V00
	Type	Large diameter steel tower
	Hub height	137m
	Drawing / Data sheet / Part no.	0041-4092.V04
Control System	Manufacturer	Vestas
	Type	Vestas Multi Processor VMP Global
Lift	Manufacturer	Avanti
	Type	Avanti Dolphin service lift
Crane	Manufacturer	Star 071/95 Liftket
	Type	max 800 kg
Manuals	O&M manual	See list of manuals 0006-6955, Rev. 24
	Transport manual	See list of manuals 0040-6996, Rev. 8
	Installation / Commissioning manual	See list of manuals 0040-6996, Rev. 8

19. Ice and Blade Throw Analysis

Based on best practice safety practices and RES' own enhanced setback requirements, the risk of blade throw and ice throw is minimal. Ice on turbine blades and towers can pose a safety risk for the general public depending on the site specific siting of each turbine in relation to publicly accessible areas such as roads, residences, and other developed areas. To date, there have been no serious accidents caused by ice throw; however that is not to say there is no risk.

To mitigate and minimize the risk of ice throw, turbine locations are set back in accordance with setbacks in the Wind Law as well as internal RES best practice safety standards of 1.5 times tip height, or approximately 230 meters (754.6 feet). In addition, implementation of best practice safety procedures during operation of the wind farm can reduce the risk of ice throw, including but not limited to: visual inspections, de-icing and anti-icing systems, regular and routine maintenance by full-time turbine technicians assigned to wind farm operations, curtailment of turbines in hazardous conditions, educating staff/landowners on specific weather conditions and associated throw risks, standard safety protocols were icing is imminent, and public safety warning signs near public access areas and project boundaries. In short, the buildup of ice on the blades impacts the ability of the turbine to function as designed. The weather conditions and decreased turbine performance will be observed in the SCADA center and the identified turbine or turbines will be adjusted to avoid or minimize both ice throw and damage to the turbine itself.

Recent studies suggest the typical range (90% of events) of ice being thrown from a turbine is less than 190m from the turbine base, which falls within our standard turbine setbacks. Almost 50% of these events may occur within the length of the turbine blade (<63m). The maximum throw distance based on best practice formulas is approximately 320m, however these events are defined as the "exceptional range" as their impact probably is minimal. Studies also suggest threats to the public from blade fragments are negligible.

20. Statement of Truth and Accuracy

I, Mark Lyons, as the RES Americas Senior Manager of Project Development, am responsible for all aspects of application and permitting with respect to RES' Ball Hill Wind Energy Project in the Towns of Villenova and Hanover, Chautauqua County, New York. I have reviewed this Amended Application and the materials submitted therewith and am familiar with the same, and hereby attest that the representations and statements made herein are true and accurate to the best of my knowledge.

BALL HILL WIND ENERGY, LLC,
A RES Americas company.

By: _____
Name: Mark Lyons
Its: Senior Manager, Project Development