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February 7, 2019

Via First-Class Mail & Electronic Filing

Hon. Kathleen H. Burgess
Secretary to the Commission
New York State Public Service Commission
Agency Building 3
Albany, NY 12223

Re: Case No. 16-F-0267: Application of Atlantic Wind LLC, for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 for Construction of the Deer River Wind Farm Project in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection in the Town of Rodman, Jefferson County, NY

Dear Secretary Burgess:

Atlantic Wind, LLC ("Atlantic Wind" or "Applicant") is proposing to construct and operate an approximately 101.4-megawatt wind electric generating facility in the Towns of Pinckney and Harrisburg, Lewis County, New York, with a point of interconnection ("POI") in the Town of Rodman, Jefferson County, New York (the "Facility"). To construct and operate the Facility, Atlantic Wind is seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (the "Siting Board") pursuant to Article 10 of the Public Service Law ("PSL") and the Siting Board's rules (16 NYCRR Part 1000 et seq.).

Pursuant to PSL § 164 and 16 NYCRR § 1000.6, and as agreed by the parties, Atlantic Wind hereby files its Application electronically with the Secretary through the Public Service Commission's Document Matter Management ("DMM") System. A check in the amount of \$101,400 for application intervenor funding as required by PSL § 164(6) will be submitted under separate cover.

The Application follows the statutory requirements of Article 10 (PSL § 164(1)), the Siting Board's rules (16 NYCRR Part 1001 et seq.), and the executed Stipulations. The Application contains, among other things, a description of the proposed Facility and the studies or program of studies conducted to evaluate potentially significant adverse environmental and health impacts, and the results of those studies along with proposed minimization and mitigation measures, where necessary.

Enclosed with the Application is the testimony of each expert witness the Applicant intends to offer at any hearing as required by PSL § 165 (16 NYCRR § 1000.6(c)(1)). The testimony includes the qualification of each witness and specifies the portion of the Application for which each witness is responsible for or supports. (See 'Attachment 1' to this letter for copies of the pre-filed testimony.)

Pursuant to PSL § 164(2) and 16 NYCRR § 1000.6(a), copies of the Application are being served upon the parties listed on the attached Service List. (See 'Attachment 2' of this letter for a copy of the Service List; an Affidavit of Service upon the Service List will be submitted when available.)

Pursuant to 16 NYCRR § 1000.7(a) and 1000.7(b)(1), notice of the Application with a summary and map (the "Application Notice") was published in the Watertown Daily Times on January 2, 2019 and the Journal & Republican on January 2, 2019, which is at least three (3) days in advance of the date on which the Application is being filed as required by the applicable regulation.

Pursuant to 16 NYCRR § 1000.7(b)(2), on January 11, 2019, at least three (3) days in advance of the date on which the Application is being filed, a letter enclosing a copy of the Application Notice was served on each member of the State Legislature in whose district any portion of the Facility is proposed to be located. (See 'Attachment 4' to this letter for a copy of the letter and Application Notice, together with proof of service.) A similar letter was sent to the Supervisors for the Towns of Harrisburg, Pinckney, and Rodman on January 11, 2019.

Pursuant to 16 NYCRR § 1000.7(b)(3), on January 8, 2019, at least three (3) days in advance of the date on which the Application is being filed, an email attaching a copy of the Application Notice was served on all persons who have filed a statement with the Secretary to the Siting Board that they desire to receive all such notices (the "Party List"). (See 'Attachment 5' to this letter for a copy of the email and Application Notice, together with proof of service.)

Pursuant to Section 5.5 of the Applicant's Public Involvement Program Plan ("PIP"), a letter enclosing a copy of the Application Notice was served on the Master Stakeholder List, including host and adjacent landowners as defined in the PIP. Submissions were made via regular mail based on the information available. (See 'Attachment 6' to this letter for a copy of the letter and Application Notice, together with proofs of service and an anonymized Master Stakeholder List.) The Applicant is seeking confidential protection for the names of the individuals on the Master Stakeholder List to preserve the privacy of the individuals identified on the list.

Pursuant to Section 5.5 of the Applicant's PIP, a copy of the Notice submitted to the stakeholders as outlined above was uploaded to the website for the Project at: <http://www.avangridrenewables.us/deerriver>.

Pursuant to 16 NYCRR § 1000.6(c)(5), the following are the names, addresses, telephone numbers and e-mail addresses of the Applicant and its Attorney:

Applicant:

Atlantic Wind, LLC
Walter Meisner
Avangrid Renewables LLC
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. (315) 874-4231 or
(844) 308-4616 (toll-free)
DeerRiverWind@avangrid.com

Applicant's Attorney:

James A. Muscato II
YOUNG/SOMMER LLC
Executive Woods
Five Palisades Drive
Albany, New York 12205
Tel. (518) 438-9907 ext. 243
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jmuscato@youngsommer.com

Finally, enclosed is a copy of the cover letter for the Applicant's motion and comprehensive brief pursuant to 16 NYCRR § 6-1.4 submitted to Presiding Examiners Costello and O'Connell, whereby the Applicant requests protection from public disclosure of certain information and documents contained in its Application. (See 'Attachment 7' to this letter for a copy of the letter requesting confidentiality.)

Please do not hesitate to call me with any questions.

Respectfully submitted,



James A. Muscato II
Laura K. Bomyea
Attorney for Atlantic Wind, LLC

Enclosures:

- Attachment 1: Pre-Filed Testimony
- Attachment 2: Application Service List
- Attachment 3: Application Notice and Affidavits of Publication
- Attachment 4: Proof of Notice served on State Legislature and Town Supervisors
- Attachment 5: Proof of Notice served on DMM Party List
- Attachment 6: Proof of Notice served on Stakeholders
- Attachment 7: Request to Examiners for Confidentiality

cc: Service List

Attachment '1'

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF
DENNIS JIMENO
TELECOMMUNICATIONS ENGINEER III
COMSEARCH

1 **Q: Please state your name, employer, and business address.**

2 A: My name is Dennis Jimeno. My employer is Comsearch (A Commscope Company), 19700 Janelia
3 Farm Boulevard, Ashburn, VA 20147.

4 **Q: What is your position at Comsearch?**

5 A: I am a Telecommunications Engineer III.

6 **Q: How long have you been employed with Comsearch?**

7 A: I have been employed with Comsearch for about 16 years.

8 **Q: Please describe your educational background and professional experience.**

9 A: I have a Bachelor of Science degree in Electrical Engineering from Virginia Tech and a Master of
10 Science degree in Electrical Engineering from George Washington University. My entire professional
11 experience has been focused in the field of wireless network communications and microwave
12 engineering. From 1995 to 1998, I was employed by MLJ, Inc. as a Design Engineer. From 1998
13 to 2000, I worked as an RF Engineering Consultant for Nextel. I was employed as a Radio Frequency
14 (RF) Planning Engineer for Winstar from 2000 to 2001. From 2001 to 2004, I worked as an RF
15 Engineering Contractor for AT&T / Cingular Wireless. Since then, I have been with Comsearch.
16 Please see the attached resume for details.

17 **Q: Please describe your current responsibilities with Comsearch.**

18 A: At Comsearch, my current responsibilities include the planning, analysis, and optimization of wireless
19 communication and microwave networks for various applications. I supervise engineering studies to
20 assess the potential impact of wind energy facilities on surrounding communications systems,
21 including microwave paths, mobile phone, over-the-air (OTA) television, AM/FM broadcast radio,
22 radar, and land mobile radio. I provide technical expertise for various RF engineering projects with

23 respect to the design and deployment of wireless networks for terrestrial, maritime, and airborne
24 applications.

25 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
26 **Board on Electric Generation?**

27 A: No. However, I submitted prefiled testimony to the New York State Public Service Commission on
28 the Central Hudson Gas and Electric Corporation's Article VII Application for the A and C Line
29 Rebuild Project. Also, I have submitted prefiled testimony to the Siting Board on Electric Generation
30 in conjunction with the Article 10 application for the Eight Point Wind Energy Project and the
31 Bluestone Wind Energy Project.

32 **Q: Have you previously served as an expert witness before any other court, agency, or other**
33 **body on the subject you plan to offer testimony on today?**

34 A: Yes, I served as an expert witness for the Freeborn Wind Project before the Minnesota Public Utilities
35 Commission and for the Lone Tree Wind Project before the Bureau County IL Zoning Board.

36 **Q: What is the purpose and scope of your testimony in this proceeding?**

37 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

38 **Q: What portion(s) of the Application is your testimony sponsoring?**

39 A: Exhibit 26, Effect on Communications.

40 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
41 **and supervision.**

42 A: Yes.

43 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
44 **documents produced by persons other than yourself/your company? If so, please cite these**
45 **sources. [These are independent studies, etc.]**

46 A: References, if any, are provided in the Exhibit.

47 **Q:** **Does this conclude your testimony?**

48 **A:** Yes.



Dennis Jimeno
Telecommunications Engineer III

QUALIFICATIONS

- Master of Science in Electrical Engineering
- Experienced in contract negotiations and managed multiple agreements between major wireless service provider and power utilities, municipalities and various communication companies in support of microwave relocation and wireless small-cell site deployment projects
- Experienced in Microwave Path Engineering
- Experienced in RF Planning of wireless networks for ground, maritime, and airborne applications
- Managed wind energy services group tasked with providing engineering studies to assess impact caused by wind energy facilities to surrounding communication systems including: microwave paths, mobile wireless, television, AM/FM radio, radar, and land mobile & emergency services
- Experienced in evaluating compliance with FCC guidelines for human exposure to RF emissions
- Experienced in Network Optimization of mobile wireless networks
- Experienced in analyzing drive test data to validate propagation model and optimize network performance
- Formally trained in wireless networks, satellite communications, and signal propagation
- Experienced in engineering software tools: Matlab, Atoll, CelPlan, Actix RPS, Mentum Planet, and MapInfo®
- U.S. Citizen

PROFESSIONAL EXPERIENCE

Telecommunications Engineer III, Comsearch

2004 - Present

Ashburn, VA

- Performed RF Coverage and Frequency Planning for 900 MHz Point-to-Multipoint SCADA system
- Designed nationwide sensor network as part of spectrum access system (SAS) for sharing 3.5 GHz frequency band between commercial and naval radio communications while minimizing interference
- Engaged in discussions with various power utilities and municipalities to negotiate terms and conditions on behalf of AT&T to attach small cell equipment and antennas on utility poles nationwide
- Reviewed, edited, and approved impact assessment studies of wind turbines with respect to microwave, radar, TV broadcast, AM/FM radio, and land mobile & emergency services
- Designed ADS-B (Automatic Dependent Surveillance Broadcast) service volume coverage throughout U.S. airspace for FAA as part of NextGen program to modernize air transportation system using GPS satellite technology
- Generated ADS-B coverage predictions for ground-to-air and air-to-ground communications with primary objective of matching or exceeding Secondary Surveillance Radar (SSR) coverage from ground level up to 60,000 ft MSL
- Performed link budget analyses to verify coverage for at least 98% of a given service volume in various interference conditions and scenarios using 1090ES and UAT links
- Designed airport surface coverage using 3D ray-tracing model with task of covering 100% of surface movement area including glide approach path from five (5) nautical miles to touchdown threshold
- Identified potential site locations using commercial towers, oil platforms, and public-use airport facilities that satisfied coverage objectives while minimizing interference to active radars
- Performed power-flux density calculations from ADS-B stations to predict interference and satisfy conditional requirements to co-exist with surveillance radars and multi-lateration systems
- Designed coverage layout for Automated Weather Observing System (AWOS) in Gulf of Mexico using oil platform locations
- Reviewed and approved antenna configuration drawings prior to installation
- Attended zoning hearings to seek board approval of permit to construct new cell sites
- Performed RF hazard analysis per OET Bulletin 65 guidelines regarding safe RF exposure limits
- Evaluated and approved site candidates for implementation

- Designed E-911 networks for Tier I and Tier II Public Safety Access Points (PSAPs) using U-TDOA and AOA geo-location technology
- Analyzed PCS and cellular network performance data to evaluate location accuracy performance and verify compliance with E-911 requirements
- Defined drive-test routes for location accuracy testing and optimization

RF Engineering Contractor, AT&T / Cingular Wireless

2001 - 2004

Various locations

- Designed expansion sites for dual-band GSM network in NY/NJ market (Paramus, NJ)
 - Evaluated potential site candidates and performed site visits
 - Attended zoning hearings to seek board approval to install new antennas on existing towers
 - Tuned RF propagation model using drive test data
 - Analyzed drive test data to identify coverage-limited areas
- Generated RF design for GSM network in south Florida market consisting of 400 sites (Lake Mary, FL)
 - Implemented overlay/underlay site designs using micro-cell solutions
 - Predicted FER performance for BCCH and TCH channels using Monte Carlo simulations
 - Performed link budget analyses and verified design ERP levels
 - Performed HSN and MAIO planning for frequency hopping algorithm
 - Managed network parameters using Nokia OSS/CM Tools and checked daily alarm reports
 - Performed on-air cell verification tests
 - Planned MSC, BSC and LAC boundaries
- Generated GSM overlay design for existing TDMA network (Bothell, WA)
 - Optimized antenna configuration based on required number of TRXs per sector
 - Generated cell neighbor lists for optimized handoffs
 - Dimensioned BSCs according to current and projected traffic load
- Designed WCS Fixed Wireless Network in 2.3 GHz band using OFDM technology (Dublin, OH)
 - Generated coverage predictions based on tuned propagation models using dB Planner tool
 - Processed drive test data and validated propagation models for 50 planned hubs
 - Analyzed drive test data to optimize coverage and minimize interference across network
 - Managed drive test team and coordinated daily activities to meet project milestones

RF Planning Engineer, Winstar

2000 - 2001

Herndon, VA

- Designed Point-to-Multipoint (PMP) fixed broadband wireless networks in 39 and 28 GHz bands
- Predicted and analyzed interference between hub and subscriber locations
- Performed coverage and capacity design trade-offs for PMP hubs for 64QAM, 16QAM, and QPSK modulation schemes
- Performed link reliability and rain fade analyses using Crane model
- Performed frequency planning
- Evaluated RF software tools and recommended technical enhancements for site coverage planning
- Performed field surveys to evaluate proposed site locations and verify radio line-of-sight (RLOS) conditions

RF Engineering Consultant, Nextel

1998 - 2000

Reston, VA

- Managed RF Engineering group in local market to design and optimize iDEN network (Mexico City)
- Responsible for planning, roll-out optimization, and setting schedules milestones for project
- Supervised frequency planning, capacity planning, and interference analysis
- Approved search rings and site candidates
- Optimized network parameters to meet key performance objectives for interconnect and dispatch services
- Planned new cell sites to meet target expansion coverage and increase traffic capacity
- Provided basic training on iDEN network optimization, design, and frequency planning
- Led RF Engineering team to optimize iDEN network (White Plains, NY)
- Performed frequency planning and interference analysis for 500+ sites for NY/NJ market
- Optimized Interconnect Location Area (ILA) & Dispatch Location Area (DLA) boundaries

- Analyzed drive test data and tuned RF propagation models
- Performed capacity analysis to project required number of base radios (BRs) per site

Design Engineer, MLJ Inc.

1995 – 1998

Arlington, VA

- Provided spectrum sharing engineering services for PCS service providers and incumbent microwave systems in 1.9 GHz band in support of microwave relocation efforts across U.S.
- Performed interference analyses between PCS and microwave point-to-point systems to predict, rank, and mitigate co-channel and adjacent channel interference
- Generated Prior Coordination Notices (PCNs)
- Designed microwave point-to-point systems
- Conducted field test measurements to calibrate RF propagation models
- Performed CDMA optimization for cellular network (Phoenix, AZ)
- Adjusted pilot channel powers to force dominant servers in areas with pilot pollution
- Created neighbor lists for efficient handover
- Performed idle-mode coverage and origination test drives to verify synch and paging channel operation
- Adjusted and tuned search windows (e.g., active, candidate, neighbor, and remaining set) to utilize all good multipath components for optimal pilot selection
- Analyzed drive test and post-test data including FER, Ec/Io, and variable Rx/Tx Power
- Derived cell edge and area service reliability
- Adjusted hand-off parameters including T-Comp, T-Add, Tt-Drop, and T-Drop
- Performed troubleshooting test drives to analyze and resolve performance problems

EDUCATION

M.S., Electrical Engineering

The George Washington University, Washington, DC

B.S., Electrical Engineering

Virginia Polytechnic Institute & State University, Blacksburg, VA

SOFTWARE

- RF Engineering: *Atoll, Mentum Planet, Actix RPS, CelPlan, ATDI, Agilent Wizard, SPLAT*
- GIS Mapping: *MapInfo, Esri ArcView*
- Programming: *Matlab*
- Microwave Engineering: *Pathloss, iQlinkXG*

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

DIANE SULLIVAN

SENIOR PRINCIPAL, ENVIRONMENTAL SERVICES

U.S. SECTOR LEADER, RENEWABLE ENERGY

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Diane Sullivan, Stantec Consulting Services, Inc. (Stantec), 61 Commercial Street, Suite 1000,
3 Rochester, New York.

4 **Q: What is your position at Stantec?**

5 A: I am a Senior Principal in Environmental Services and U.S. Sector Leader for Renewable Energy at
6 Stantec.

7 **Q: How long have you been employed by Stantec?**

8 A: I have been employed by Stantec since 2016.

9 **Q: Please describe your educational background and professional experience.**

10 A: I have a Bachelor of Science in environmental studies from the State University of New York College
11 of Environmental Science and Forestry in Syracuse, New York. I have more than 20 years of
12 professional practice experience in energy and utility routing/siting; local, state and federal licensing
13 and permitting; visual resource, biological and aquatic resource surveys; agency consultation;
14 environmental impact analysis; and environmental compliance. Prior to joining Stantec in 2016, I was
15 employed by Haley & Aldrich, an environmental consulting firm in Rochester, New York, from 2013–
16 2016 as the Capital Energy Program Manager. Previous to Haley & Aldrich, I was employed by
17 Environmental Design & Research, an environmental consulting firm located in Syracuse, New York,
18 where I held various positions including environmental scientist (1996–1999), environmental project
19 manager (2001–2007), and Vice President/Principal (2008–2013). My area of expertise is state and
20 federal permitting and licensing of utility scale electric transmission, gas transmission and renewable
21 energy projects. I have been the project director or project manager of multiple projects reviewed
22 under the New York Public Service Law and equivalent programs in other states. In that role, I have
23 participated directly in conducting or overseeing the preparation of visual impact analyses and other

24 environmental impact studies; prepared numerous plans, reports and applications in support of
25 energy projects; and overseen and coordinated the permit/certification review and approval process.

26 **Q: Please describe your current responsibilities with Stantec.**

27 A: As Senior Principal, Environmental Services, and U.S. Sector Leader for Renewable Energy, I am
28 responsible for overseeing Stantec's renewable energy program in the U.S. My responsibilities also
29 include directing solar, wind, offshore wind and hydropower renewable energy and utility scale
30 electric transmission projects, including managing project execution teams, technical report
31 preparation or deliverable quality review, and client coordination and management.

32 **Q: Have you previously testified before the New York State Public Service Commission or Siting
33 Board on Electric Generation?**

34 A: Yes, I have provided testimony in the following cases: 03-T-0515, Flat Rock Wind Power LLC; 06-T-
35 0650, New York Regional Interconnect; 10-T-0153/10-G-0295, St Lawrence Gas and 14-T-0360/14-
36 T-0458, Dunkirk Gas Corporation and National Fuel Gas Distribution Corporation. In these cases I
37 provided prefiled testimony, direct testimony and/or rebuttal testimony related to the preparation of
38 certain application exhibits addressing land use and environmental resources and impact analyses.

39 **Q: Have you previously served as an expert witness before any other court, agency, or other
40 body on the subject you plan to offer testimony on today?**

41 A: Yes, I provided prefiled testimony in Maryland as part of the application for a Certificate of Public
42 Convenience and Necessity for the Big Savage 138kV Transmission Line for the environmental
43 assessment report prepared as a part of the application.

44 **Q: What is the purpose and scope of your testimony in this proceeding?**

45 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

46 **Q: What portion(s) of the Application is your testimony sponsoring?**

47 A: Exhibit 4, Land Use and Exhibit 24, Visual Impacts.

48 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
49 **and supervision.**

50 A: Yes.

51 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
52 **documents produced by persons other than yourself/your company? If so, please cite these**
53 **sources. [These are independent studies, etc.]**

54 A: References are provided in the Exhibits.

55 **Q: Does this conclude your testimony?**

56 A: Yes.

Diane Sullivan

Senior Principal, Environmental Services
US Sector Leader, Renewable Energy



Over the course of her over 20-year consulting career, Diane Sullivan has provided a broad consultancy: from conducting on-the-ground ecological resource surveys and preparing key regulatory project permitting strategies, to directing multidisciplinary service teams and managing a growing renewable energy consulting program. Her expertise encompasses the full gamut of environmental impact issues related to power development – both conventional and renewable – including surface waters and wetlands, siting and routing, visual and cultural resources, threatened and endangered species, and land use. In fact, she's directed and managed planning, environmental, and engineering services for over 2,500 megawatts of renewable energy projects and over 600 miles of gas and electric transmission and distribution systems and served as an expert witness in state licensing applications as it relates to visual, ecological, and land use impacts. As Stantec's Environmental Sector Leader for Renewables in the US, Diane draws from that experience to manage our renewable energy work, bringing together our network of experts to help renewable energy clients.

EDUCATION

Bachelor of Science, Environmental Science, Biological Concentration, State University of New York College of Environmental Science and Forestry, Syracuse, New York, 1997

MEMBERSHIPS

Member, American Wind Energy Association
Member, New York State Wetlands Forum
Member, Society of Wetland Scientists
Member, Women of Renewable Industries, and Sustainable Energy (WRISE)

PROFESSIONAL DEVELOPMENT

Moderator, AWEA Wind Siting & Environmental Compliance Conference, Wildlife Issues Panel, March 2018.

Moderator, EUCI Energy Leadership Conference for Women, June 2016.

US Fish & Wildlife Service Endangered Species Act / Migratory Bird Treaty Act / Bald and Golden Eagle Protection Act Training, 2014

Federal Energy Regulatory Commission Environmental Review and Compliance for Natural Gas Facilities Training, 2013, 2015

Presenter, Energy and Environment Conference, Renewable Energy Development on Brownfields, February 2014.

Presenter, American Wind Energy Association Siting Conference, Federal Wetland Permitting 101, March 2011.

Presenter, 2009 Herkimer-Oneida County Land Use Training Conference, State Environmental Quality Review, October 2009.

PROJECT EXPERIENCE

Deer River Wind Farm, Lewis County, New York

Serves as the project director for a proposed commercial-scale wind power project, including the installation and operation of wind turbines and associated transmission interconnection, electrical collection lines, access roads, meteorological towers, and operation and maintenance facility. The project is located will generate up to 100 MW, a major electric generating facility under Article 10 of the Public Service Law (PSL). Stantec is supporting Avangrid Renewables application for a Certificate of Environmental Compatibility and Public Need. For the work of this project, Stantec has engaged in public open house meetings, prepared a Preliminary Scoping Statement, developed Stipulations, and prepared a Certificate Application. The Application evaluates the potential impact of the construction, operation and maintenance of the facility including biological and wildlife surveys, wetlands/ecological surveys, cultural resource investigations, visual impact analysis, socioeconomic analysis, communication interference and transportation studies.

Lighthouse Wind*, Somerset and Yates, New York

Served as the Project Director for a 200 MW wind energy generation facility on approximately 24,000 acres located in the Town of Somerset, Niagara County and the Town of Yates in Orleans County in western New York State. Overseeing the preparation of a Preliminary Scoping Statement (PSS), compliant with the requirements of Article 10 of the Public Service Law. Managing all project subconsultant deliverables including avian/bat surveys, wetlands/ecological surveys, cultural resource investigations, visual impact analysis, socioeconomic analysis, communication interference and transportation studies. The project requires Certificate of Environmental Compatibility and Public Need from New York State Public Service Commission (NYSPSC) pursuant to the requirements Article 10 of the New York State PSL.

* denotes projects completed with other firms

Diane Sullivan

Senior Principal, Environmental Services
US Sector Leader, Renewable Energy

Great Lakes Offshore Wind Power Project*, Lake Ontario and Lake Erie, New York

Served as the Project Manager and lead technical reviewer for Great Lakes Offshore Wind Power Project (GLOW), a New York Power Authority competitive solicitation process to support offshore wind power development in Lake Ontario or Lake Erie. Conducted a multi-disciplinary review of the proposals. Evaluated five responses to the GLOW RFP ranging from 120MW to 500MW. Reviewed ecological, threatened and endangered species, and visual resources that may be impacted by offshore development. Prepared a guidance document and critical issues analysis to be incorporated into the scope of studies by the developers responding to New York Power Authorities Requests for Information and Development Proposals. Supported the Authority by being a member of a review team, evaluating and scoring responding developers, and conducting technical interviews of developers to assist with the selection of the award.

Ball Hill Wind Farm*, Chautauqua County, New York

Served as the Principal in Charge and key client contact providing direct consultation to the Town of Villenova (Lead Agency) for the environmental review pursuant to State Environmental Quality Review Act of the proposed Ball Hill Windpark (formerly owned by Noble, Duke Energy, presently RES America). Provided consultation to the Town to establish itself as Lead Agency, conduct informal scoping, and review of the Draft Environmental Impact Statement and Supplemental Environmental Impact Statement. Supported the municipality throughout the environmental review process.

Roaring Brook Wind Power Project*, Lewis County, New York

Served as the Principal in Charge for the site planning, environmental impact analysis, visual impact analysis, ecological surveys, wetland studies and permitting, and local site plan applications for this proposed 79MW wind powered electric generating facility and ancillary facilities including a 4 mile electrical interconnection. Prepared all Draft, Supplemental, and Final Environmental Impact Statements and Findings Statement pursuant to the State Environmental Quality Review Act. Also prepared Wetland Mitigation Plans, Invasive Species Control Plan, Agricultural Data Statement, local site plan applications, and Joint Application for Permit for anticipated impacts to federal and state wetlands, streams and waters.

Maple Ridge Wind Farm*, Lewis County, New York

Served as the project manager for the site planning, environmental impact analysis, and state and federal wetland permitting for a 195-turbine 330-MW project; located in three Tug Hill communities. Prepared Draft and Final Environmental Impact Statements pursuant to the State Environmental Quality Review Act. Conducted all agency coordination and public outreach efforts. Also prepared wetland delineation reports, visual impact assessment and oversaw the preparation of the cultural resource surveys. Lead the field crews and conducted wetland delineations within a 21,000 acre study area. Prepared Joint Application for Permit for an Individual Section 404 Permit, Section 401 Water Quality Certification and NYSDEC Article 24 Freshwater Wetland Permit for unavoidable adverse impacts to streams and wetlands. Performed alternatives analysis and detailed site selection for compensatory wetland mitigation areas. Prepared site specific mitigation design plans for two sites and prepared construction drawings. Oversaw long term 5 year monitoring of compensatory wetland mitigation areas to monitor success. Coordinated the Corps evaluation of jeopardy determination to the Indiana Bat, evaluated given the site's proximity to the Glen Park hibernacula located in Jefferson County, NY. Once the project was operational, acted as the moderator of the Technical Advisory Committee (TAC) for the preparation of a the scoping and review of a three year post construction avian and bat fatality surveys for the project.

SummitWind Farm*, Grant and Roberts County, South Dakota

Managed the preparation of an applicant-prepared National Environmental Policy Act (NEPA) Environmental Assessment (EA) for the proposed commercial scale community wind farm located along the Coteau des Prairies in Grant and Roberts Counties, South Dakota. Project includes up to 41 wind turbine generators with a maximum generating capacity of up to 90 megawatts (MW) which will be interconnected to the United States Department of Energy (DOE) Western Area Power Administration (Western) transmission. Conducted public scoping, worked with the federal agency to develop the content of the EA, coordinated with the involved federal agencies, prepared responses to public comments, prepared the draft and final EA, prepared draft FONSI. Provided consulting services to coordinate obtaining a Special Use Permit for impacts to the United States Fish and Wildlife (USFWS) grassland and wetland easements. Key resource areas evaluated as a part of the EA include visual impacts, cultural resources and associated tribal coordination, threatened and endangered species consultations, grassland habitat, and wetlands/Waters of the US.

* denotes projects completed with other firms

Diane Sullivan

Senior Principal, Environmental Services
US Sector Leader, Renewable Energy

Norfolk to Chateaugay Natural Gas Transmission and Distribution*, Franklin and St. Lawrence Counties, New York

Served as the Principal in Charge of a 48-mile natural gas transmission line and 50-miles of gas distribution. Prepared applications pursuant to Article VII and Section 68 of the Public Service Law, and all associated ecological, surface water, cultural, visual and land use studies. Prepared all State Environmental Quality Review documentation for the Public Service Commission, as Lead Agency. Provided pre-filed testimony to the Commission. Oversaw completion of the Environmental Management and Construction Plan, Agricultural Management Plan, Invasive Species Control Plan, and Stormwater Pollution Prevention Plan and coordinated all federal wetland and stream permitting pursuant to Section 404 of the Clean Water Act. Negotiated mitigation plan for potential impacts to Blanding's turtle. Obtained first approval in the joint New York/Buffalo District for In Lieu Fee Program with Ducks Unlimited for unavoidable impacts to streams and wetlands in the project area. Prepared and oversaw the program for the environmental compliance monitoring during construction.

230kV Transmission Line*, Lewis County, New York

As a part of the Maple Ridge Wind Farm project's interconnection, oversaw the preparation of an Article VII application for the Public Service Commission for the installation of a new 10-mile 230kV electric transmission line and two associated substations. The scope of work included topographic and boundary survey, wetland delineation, ecological surveys, visual impact assessment, and project management of a team of electrical engineers, wind power developers, and cultural resource specialists. Coordinated all agency coordination and public outreach. Prepared an Environmental Management and Construction Plan, including plan and profile drawings and companion report, outlining treatment of vegetation and erosion control management during construction. Also obtained federal wetland permits pursuant to Section 404 of the Clean Water Act.

Big Savage/Twin Ridges 138 kV Transmission Lead*, Allegany County, Maryland

Served as the Principal in Charge and oversaw the preparation of an Environmental Impact Assessment Report as a part of a Certificate of Public Convenience and Necessity (CPCN) Application for review by the Maryland Public Service Commission for a proposed transmission line connecting a wind power generating facility. Oversaw the preparation of the visual resource assessment and cultural resource reports for the project, incorporated studies prepared in support of the application. Also provided prefiled and direct testimony on behalf of the Applicant in support of the Application, which was ultimately approved and issued.

New York Regional Interconnect 190 mile 400+kV Transmission Line*, Multiple Counties, from Marcy in Oneida County to Windsor in Orange County, New York

Managed the data collection phase of the aesthetic resource inventories including geographic information system (GIS) data cataloging, viewshed analysis, land cover classification, and field surveys within a three mile corridor along the 190-mile electric transmission route. The project included the preparation of more than 87 visual simulations and an extensive Visual Impact Assessment report of findings. The project experienced significant public opposition from environmental groups and residents along the planned corridor. Provided responses to extensive interrogatory and discovery requests, and expert witness testimony on impacts to aesthetic and visual resources before the Public Service Commission and opponent attorneys.

Dunkirk Natural Gas Transmission Line*, Chautauqua County, New York

Project Director for the preparation of an application pursuant to New York State Article VII and Section 68 of the Public Service Law, for a 9.7-mile natural gas transmission line. Coordinated all associated ecological, surface water, cultural and land use studies, as well as land survey and engineering. Oversaw completion of the Environmental Management and Construction Standards and Practices, Agricultural Management Plan, Invasive Species Control Plan, and coordinated all federal wetland and stream permitting pursuant to Section 404 of the Clean Water Act. Developed compensatory wetland mitigation plan with the Corps of Engineers. Coordinated public outreach efforts and provided expert witness testimony in the proceeding. Acted as the key point of contact for all state and federal agencies during project review, permitting, and approval.

Southeast Solar Power Portfolio Development, Multiple Sites, Southeastern US

Serves as the Project Director and Client Manager for the pre-construction environmental services and regulatory permitting for 40 ground-mounted PV solar facilities in the southeastern US for a confidential client. Services provided by Stantec include Critical Issues Analyses with an assessment of local, state, and federal permit requirements (permit matrix), habitat assessments for listed rare, threatened and endangered species, federal wetland and stream delineations, cultural resource investigations, Phase 1 Environmental Site Assessments, and visual impact analysis. Several projects will have points of interconnection that required an Environmental Assessment pursuant to the NEPA and Stantec is preparing project scoping and Environmental Assessments. Projects are located in Tennessee, Georgia, Mississippi, Alabama, Louisiana, Arkansas, and South Carolina and range in size between 10 MW and 100 MW.

* denotes projects completed with other firms

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

EBEN D. BAKER

ASSOCIATE ECOLOGIST AND PROJECT SCIENTIST

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Eben D. Baker, Stantec Consulting Services, Inc. (Stantec), 30 Park Drive, Topsham, ME 04086.

3 **Q: What is your position at Stantec?**

4 A: I am an Associate Ecologist and Project Scientist at Stantec.

5 **Q: How long have you been employed by Stantec?**

6 A: I have been employed by Stantec since 2015.

7 **Q: Please describe your educational background and professional experience.**

8 A: I received a Bachelor of Arts degree in biology from the University of Maine and have completed
9 additional training in wetland classification, hydric soils and U.S. Army Corps of Engineers wetland
10 delineation methods from the University of New Hampshire. Since joining Stantec, I have been
11 responsible for all types of natural resource survey efforts, including rare and invasive plant surveys,
12 wetland delineations, vernal pool surveys, and raptor, raptor migration, bat acoustic and other wildlife
13 surveys/analysis. I also have extensive experience in avian species surveys/studies, including, but
14 not limited to, avian radar studies, visual surveys, point count surveys, acoustic bat surveys and nest
15 counts. My specific responsibilities have included: project design and setup; general reconnaissance;
16 quantitative, community and species-specific survey activities in accordance with agency protocols;
17 natural community mapping and analysis; and preparation of reports. Prior to joining Stantec, I was
18 employed by Spectra Energy monitoring construction of a new natural gas transmission line. A copy
19 of my resume is attached.

20 **Q: Please describe your current responsibilities with Stantec.**

21 A: In my current role as an Associate Ecologist and Project Scientist at Stantec, I have worked as field
22 lead and/or project scientist on wetland delineations and vernal pool studies for energy and other
23 projects, including construction of transmission lines and wind energy facilities. I have also conducted

24 numerous wildlife surveys, invasive species surveys, rare plant surveys and other studies in
25 conjunction with energy and other projects.

26 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
27 **Board on Electric Generation?**

28 A: No.

29 **Q: Have you previously served as an expert witness before any other court, agency, or other**
30 **body on the subject you plan to offer testimony on today?**

31 A: No.

32 **Q: What is the purpose and scope of your testimony in this proceeding?**

33 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

34 **Q: What portion(s) of the Application is your testimony sponsoring?**

35 A: Exhibit 22, Terrestrial Ecology and Wetlands (plants, wetlands and wildlife, excluding birds and bats)
36 and Exhibit 23, Water Resources and Aquatic Ecology (excluding Stormwater Pollution Prevention
37 Plan, Spill Prevention, Control and Countermeasures Plan, and well survey).

38 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
39 **and supervision.**

40 A: Yes.

41 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
42 **documents produced by persons other than yourself/your company? If so, please cite these**
43 **sources. [These are independent studies, etc.]**

44 A: References, if any, are provided in the Exhibits identified above.

45 **Q: Does this conclude your testimony?**

46 A: Yes.

Eben is a Project Scientist with 6 years of experience implementing natural resource survey efforts in accordance with regulatory agency protocols. Survey areas include: rare and invasive plant surveys, wetland delineations, vernal pool surveys, raptor surveys, raptor migration surveys, bat acoustic surveys, Bicknell's Thrush presence/absence surveys, and marine radar surveys/analysis. He has performed field data management and authored natural resource assessments and reports to assist with the preparation of local, state, and federal permit applications. He has worked on a variety of natural community and rare plant surveys and projects ranging from general reconnaissance observations to quantitative, community, and species-specific surveys. These projects have involved natural community mapping and analysis for energy and transportation projects, utility corridors, and development sites throughout New England, and various locations in the United States.

His prior experience includes working as an intern for the U.S. Fish and Wildlife Service. As an intern, Eben assisted in conducting botanical surveys, big-horn sheep radio tracking, and invasive plant remediation, as well as other field and administrative tasks. As an employee of Spectra Energy, he spent over a year monitoring construction of a new natural gas transmission line. His tasks for this project included compilation of as-built records for the mainline and compressor stations, hydrostatic testing inspection, and other oversight duties as needed.

EDUCATION

Advanced Field Botany Certificate (Pending), New England Wild Flower Society, Framingham, Massachusetts, 2015-Present

Bachelor of Arts, Biology, University of Maine at Farmington, Farmington, Maine, 2007

CERTIFICATIONS & TRAINING

Commercial Master Applicator #CMA 5675/5A, 6A, 6B, Maine Board of Pesticides Control, Augusta, Maine, 2018

OSHA 40-hour Hazardous Waste Operations and Emergency Response, Topsham, Maine, 2015

Army Corps of Engineers - Wetland Delineation Methods, University of New Hampshire, New Hampshire, 2015

Wilderness First Responder, SOLO, New Hampshire, 2015

Introduction to Hydric Soils in the Northeast, University of New Hampshire, New Hampshire, 2010

Wetland Classification, University of New Hampshire, New Hampshire, 2010

Certified Associate Ecologist, Ecological Society of America, Washington, District of Columbia, 2017

MEMBERSHIPS

Member, Maine Association of Wetland Scientists

Member, Association of State Wetland Managers

Member, Ecological Society of America

Member, Josselyn Botanical Society of Maine

Eben D. Baker

Associate Ecologist, Project Scientist

PROJECT EXPERIENCE

Natural Resource Services

Terra-Gen, Proposed Wind Farm, Humboldt County, California (Project Scientist)

Contributed to project design and setup of one of the most robust avian radar studies to date for tracking Marbled Murrelet movements (*Brachyramphus marmoratus*) at a proposed wind farm. Tasks included crepuscular surveys, site setup, data sheet design, equipment design, installation, and maintenance. Additionally, acoustic bat detectors were deployed across the study area to assess bat species composition and relative abundance.

Vermont Electrical Power Co. (Velco) and Green Mountain Power (GMP), Utility Line Upgrade Project, Various Sites Across Vermont (Project Scientist)

Worked as a field lead for a project with sites spread across Vermont performing vernal pool surveys, wetland delineation, invasive species identification, rare, threatened and endangered species identification, and construction access planning for approximately 55-miles of transmission line and 100 acres of substations. Work included reporting tasks following field surveys for VT Act 250 requirements. Authored Natural Resource Reports pursuant to VT Act 250 application requirements

Proposed Wind Project - Proposed Wind Projects, Oxford County, Maine (Project Scientist)

Conducted pre-construction wildlife surveys for two proposed wind projects in Oxford County. These assessments included visual raptor surveys, eagle point count surveys, nocturnal radar migration surveys, and acoustic bat surveys. Assisted with task management, data collection, data analysis, and reporting.

Downeast/Apex Wind – Eagle Nest Surveys, Washington County, Maine (Project Scientist)

Served as a project scientist for aerial eagle nest flights to document Bald eagle nest activity through the project area. This includes nest counts, fledgling observations, incidental eagle observations and searching for any new nest activity within the project area.

Number Nine Rare Plant Survey, Vernal Pools, and Wetland Delineations, Aroostook County, Maine (Project Scientist)

Worked on vernal pool studies that documented the biological and physical characteristics of potential vernal pool habitat based on the criteria of the Maine Department of Fisheries and Wildlife and the Natural Resources Protection Act. As a field member, conducted a rare plant survey and natural community characterization throughout the project area.

Eversource Transmission Line Wetland Delineations, New Hampshire (Project Scientist)

Worked as a project scientist and conducted wetland delineations and natural resource surveys on an existing transmission line with a project area over 25 miles in length for proposed structure replacement in northern New Hampshire. Identified streams and Wetlands of Special Significance, documented the biological and physical characteristics of potential vernal pool habitat.

** denotes projects completed with other firms*

Eben D. Baker

Associate Ecologist, Project Scientist

Oakfield Wind Project Invasive Species Monitoring, Aroostook County, Maine (Project Scientist)

Conducted invasive species surveys along an approximately 60 mile transmission line and 48 turbine wind project according to the standards and methods developed in the Invasive Species Management Plan for the project. Identified invasive species, documented populations, and applied either chemical or manual control measures based on the presents of mapped natural resources and the criteria defined in the Vegetation Maintenance Plan.

Rollins Wind Project Invasive Species Monitoring, Penobscot County, Maine (Project Scientist)

Conducted multiple years of invasive species surveys along a recently constructed transmission line right-of-way according to the standards and methods developed in the Invasive Species Management Plan. Identified invasive species, documented populations, and applied either chemical or manual control measures based on the presence of mapped natural resources and the criteria defined in the Vegetation Maintenance Plan.

Downeast/Apex Wind – Rare Plant Surveys, Washington County, Maine (Project Scientist)

Performed floristic surveys for rare plants throughout the project area with a specific focus on Canada Mountain Rice grass, *Pipthatherum canadense*. This state-listed rare plant was locally abundant within the project area comprised of glacial outwash blueberry barrens.

Alder Stream & Moose Mountain Wind Project Raptor, Bat Acoustics, Bicknell's Thrush, and Nocturnal Migration Radar Surveys, Maine (Project Scientist)

Responsible for the deployment and operation of nocturnal bird and bat radar equipment throughout the 2016 field season. In addition, I was responsible for the deployment and operation of bat acoustic units for a pre-construction survey during the 2016 and 2017 field seasons. During the spring season I also conducted raptor surveys to document species, location, behavior and position relative to potential turbines. During this survey period I was responsible for conducting surveys for Bicknell's Thrush, a rare bird in Maine occupying structural complex, high elevation areas.

Mustang Run Wind Project, Osage County, Oklahoma (Project Scientist)

Served as a field lead performing Greater Prairie-Chicken surveys and bald eagle point count surveys.

Number Nine Lynx Study, Aroostook County, Maine (Project Scientist)

Contributed to the study design and implementation for a population study of Canada Lynx at a proposed wind project in Aroostook County, Maine. Surveys included winter tracking, scat and hair collection and use of remote game cameras.

** denotes projects completed with other firms*

Eben D. Baker

Associate Ecologist, Project Scientist

Downeast/Apex Wind Wetland Delineations, Washington County, Maine (Project Scientist)

Worked as a project scientist and conducted wetland delineations and natural resource surveys over an area totaling approximately 5,000 acres for a proposed wind project in Downeast Maine. Identified streams and Wetlands of Special Significance, documented the biological and physical characteristics of potential vernal pool habitat.

Record Hill Wind Raptor Surveys (Project Scientist)

Conducted post-construction raptor surveys to document species, location, behavior and position relative to operation turbines at Record Hill Wind.

Deer River Wind Project – New York (Project Scientist)

Served as a field lead performing vernal pool surveys, wetland delineation, invasive species identification, and construction access planning for a proposed wind project.

Highland Wind Project Vernal Pool Surveys*, Maine (Project Scientist)

Identified biological and physical characteristics of vernal pool habitat for a proposed wind development in western Maine, including egg mass counts and identification of significant vernal pools.

Proposed Wind Project – New York (Project Scientist)

Conducted pre-construction eagle point count surveys and breeding bird surveys.

Avian Radar Analysis, Topsham, Maine (Project Scientist)

Conducted analysis of radar data to determine avian flight trajectory, velocity, and frequency for multiple project sites. Analysis results were then provided to clients to assist with their project planning and permit applications in compliance with applicable local, state, and federal natural resource regulation.

Rare Plant Surveys and Transplanting, Pine Street Boat Launch, Walpole, New Hampshire (Project Scientist)

Assisting botanist responsible for completing rare plant surveys at a proposed dredge site on the Connecticut River in Walpole, New Hampshire. Field surveys targeted several plant species including Vasey's pondweed (*Potamogeton vaseyi*), grass-leaved mud-plantain (*Heteranthera dubia*), long-leaved pondweed (*Potamogeton nodosus*), pygmy-weed (*Crassula aquatica*), and awned flatsedge (*Cyperus squarrosus*). Conducted transplanting to relocate rare aquatic plants outside of project area

Clear Sky Wind Project, Kay and Osage County, Oklahoma (Project Scientist)

Served as a field lead performing Greater Prairie-Chicken (*Tympanuchus cupido*) surveys and bald eagle point count surveys.

** denotes projects completed with other firms*

Eben D. Baker

Associate Ecologist, Project Scientist

Bingham Wind Vernal Pools and Wetland Delineations, Somerset County, Maine (Project Technician)

Conducted wetland delineations, vernal pool surveys, and Global Positioning System surveys over an area totaling approximately 6,800 acres for a proposed wind farm in central Maine. Determined wetland boundaries using the technical criteria described in the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). Identified streams and Wetlands of Special Significance based on the criteria in the Maine Department of Environmental Protection Natural Resource Protection Act (NRPA). Characterized wetland and waterbody resources based on the U.S. Fish and Wildlife Service Classification of Wetlands and Deep Water Habitats of the United States (Cowardin et al. 1979). Documented the biological and physical characteristics of potential vernal pool habitat based on the criteria of the Maine Department of Fisheries and Wildlife and the NRPA.

Calpine Renewables, Proposed Wind Farm, Oxford County, Maine (Project Scientist)

Conducted wetland delineations and natural resource surveys over an area totaling approximately 760 acres for a proposed wind project in Oxford County, Maine. Identified streams and Wetlands of Special Significance, documented the biological and physical characteristics of vernal pools.

Everpower Renewables, Proposed Wind Farm, Oxford County, Maine (Project Scientist)

Conducted wetland delineations and natural resource surveys over an area totaling approximately 600 acres for a proposed wind project in Oxford County, Maine. Identified streams and Wetlands of Special Significance, documented the biological and physical characteristics of vernal pools.

Oil Spill Response, Interstate Oil Spill in Gulf of Mexico (Natural Resource Advisor)

Natural Resource Advisor (NRA) conducting environmental oversight of oil spill cleanup activities in compliance with an emergency consultation under Section 7 of the Endangered Species Act. NRAs worked directly with operational cleanup crews to implement Best Management Practices (BMPs). These BMPs served as the formal technical guidance issued under the emergency consultation. The objective of this work was to minimize secondary impacts of the cleanup activities on protected resources, including sea turtles, migratory and nesting shorebirds, beach mice, mangrove wetlands, estuaries, coastal wetlands, and dune systems. Implemented BMPs and conducted surveys for piping plover and sea turtles within designated critical habitats. Conducted training and oversight of cleanup crews and prepared daily reports documenting NRA activities. Worked closely with cleanup operations to provide education on BMPs and documenting daily compliance for use in USFWS consultation process and evaluation of secondary impacts to protected resources as part of the Natural Resources Damage Assessment (NRDA).

** denotes projects completed with other firms*

Eben D. Baker

Associate Ecologist, Project Scientist

Eversource Transmission Lines, Norfolk County, Massachusetts (Project Scientist)

Conducted wetland delineations/verifications and natural resource surveys over an area totaling approximately 7.5 miles of existing transmission line right-of-way. Identified streams and wetland classifications pursuant to Massachusetts and federal wetland regulations. Documented the biological and physical characteristics of potential vernal pools.

Hoosac Wind, Rare Plant Survey, Franklin and Berkshire Counties, Massachusetts (Project Scientist)

Assisted with rare plant surveys as part of a long-term monitoring effort of transplanted populations of large-leaf goldenrod (*Solidago macrophylla*). Survey efforts culminated in reporting products including frequency distribution mapping of RTE populations.

Old Orchard Beach Marsh Restoration, Old Orchard Beach, Maine (Project Scientist)

Conducted invasive species surveys and treatment in three salt marsh areas in accordance with Maine Department of Environmental Protection grant funding. Documented native species for preparation of a restoration planting plan, oversaw volunteers during invasive treatment and implementation of the restoration planting.

Bingham Wind Project, Somerset County, Maine (Project Scientist)

Scientist responsible for establishing baseline water quality conditions of several streams associated with a wind energy development facility in western Maine. Streams were monitored by completing an inventory and analysis of benthic macroinvertebrate species through systematic sampling and analytical methods.

Significant Ecological Evaluations, Coos County, New Hampshire (Project Technician)

Assisted in performing a broad-spectrum survey and evaluation of significant natural resources within an approximately 60,000-acre project area in northern New Hampshire. Evaluations included rare plant and wildlife surveys, wildlife habitat characterizations, reconnaissance wetland and stream surveys, and natural community characterizations.

Enbridge, Line 6b Vegetation Monitoring, Marshall, Michigan (Project Scientist)

Performed botanical surveys following post-spill monitoring protocol throughout the project area. Surveys included calculations of Floristic Quality Assessments (FQA), tree/shrub plots, and vegetative cover to satisfy regulatory requirements.

Rollins Wind Project Resource Demarcation, Lincoln, Maine (Project Technician)

Prior to construction natural resources demarcation was conducted. This included identifying and marking natural resources with the appropriate buffer zone as defined by the Natural Resource Protection Act, Maine Inland Fisheries and Wildlife, Maine Department of Environmental Protection, and the Army Corps of Engineers.

** denotes projects completed with other firms*

Eben D. Baker

Associate Ecologist, Project Scientist

Vermont Electrical Power Co. (Velco) New Haven Substation Botanical Survey, Addison County, Vermont (Project Scientist)

Performed a rare plant survey and botanical inventory adjacent to an existing substation. Survey effort satisfied VT Act 250 requirements regarding identification and protection of any rare, threatened or endangered plant species.

Ecological Intern, San Andres National Wildlife Refuge, New Mexico (Intern)

Assisted in setting transects, conducting botanical inventories, and data quality assurance for a long-term study of plant succession with regards to prescribed burning methods. Assisted in tracking big-horn sheep populations over rugged terrain using radio telemetry equipment and field navigation. Conducted invasive species surveys throughout the refuge according to the standards and methods developed in the Invasive Species Management Plan. Identified invasive species, documented populations, and applied either chemical or manual control measures based on the presence of mapped natural resources and the criteria defined in the Vegetation Maintenance Plan.

Maine Army National Guard, Penobscot County, Maine (Project Scientist)

Conducted wetland delineations and natural resource surveys over an area totaling approximately 6,000 acres for a proposed wind project in Penobscot County, Maine. Identified streams and Wetlands of Special Significance, documented the biological and physical characteristics of potential vernal pools.

Maritimes & Northeast Phase IV Construction Monitoring*, Washington County, Maine (Inspector)

Worked as an inspector to maintain accurate as-built information, document hydrostatic testing of installing gas lines, and construction environmental monitoring. Worked on behalf of Maritimes & Northeast to ensure that the company's standard operating procedures were followed. The project ultimately doubled the natural gas carrying capacity of Maritimes & Northeast transmission pipeline.

** denotes projects completed with other firms*

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

ELIZABETH M. ANNAND

PROJECT MANAGER

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Elizabeth M. Annand, Stantec Consulting Services, Inc. (Stantec), 30 Park Drive, Topsham, ME
3 04086.

4 **Q: What is your position at Stantec?**

5 A: I am a Project Manager at Stantec.

6 **Q: How long have you been employed by Stantec?**

7 A: I have been employed by Stantec since 2006.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Science in biology and wildlife management from Delaware State College
10 and a Master of Science in wildlife biology from the University of Missouri. I am a Certified Wildlife
11 Biologist and Qualified Airport Biologist with 25 years of experience in the natural resource
12 management field. Before joining Stantec, I worked as a wildlife biologist for four other consulting
13 firms in other parts of the country and for the US Geological Survey biological resources division. My
14 general areas of expertise include: conducting plant and wildlife surveys; preparing biological
15 assessments; analyzing impacts of projects on wildlife, including birds and bats; developing habitat
16 conservation plans; and preparing permit applications, environmental impact statements (EIS) and
17 other similar documents relating to wildlife impacts. A copy of my resume is attached.

18 **Q: Please describe your current responsibilities with Stantec.**

19 A: As a Project Manager at Stantec, I am responsible for conducting environmental reviews for National
20 Environmental Policy Act (NEPA), Endangered Species Act, and Clean Water Act compliance, with
21 a focus on integrated wildlife resource management. With respect to wind energy projects, I have
22 been involved in reviews relating to wildlife, including conducting preconstruction wildlife surveys and
23 wildlife habitat evaluations, analyzing existing conditions and potential effects of projects on birds

and bats, and preparing wildlife impact sections of applications. Over the years, I also have served as NEPA Specialist in conjunction with numerous wind energy projects for which Stantec was responsible for preparing EISs. In that capacity, I coordinated with the acting agency, prepared and revised the EIS, responded to public comments and ensured compliance with NEPA. More generally, since joining Stantec, my responsibilities have included: conducting plant and wildlife surveys; analyzing the impact of projects on wildlife and habitat, including preparing biological assessments; developing habitat conservation plans; and preparing permit applications, EISs and other compliance documents. Although much of my recent work has focused on wind energy projects, I have provided services on other energy projects as well as transportation, communication and recreational projects.

Q: Have you previously testified before the New York State Public Service Commission or Siting Board on Electric Generation?

A: No.

Q: Have you previously served as an expert witness before any other court, agency, or other body on the subject you plan to offer testimony on today?

A: No.

Q: What is the purpose and scope of your testimony in this proceeding?

A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

Q: What portion(s) of the Application is your testimony sponsoring?

A: Exhibit 9, Alternatives and Exhibit 22 (excluding wetlands)

Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction and supervision.

A: Yes.

46 **Q:** In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or
47 documents produced by persons other than yourself/your company? If so, please cite these
48 sources. [These are independent studies, etc.]

49 A: References, if any, are provided in the Exhibits identified above.

50 **Q:** Does this conclude your testimony?

51 A: Yes.

Elizabeth conducts environmental review for National Environmental Policy Act, Endangered Species Act, and Clean Water Act compliance. She has 12 years' experience as a Project Manager with Stantec and has 25 years' experience in the Natural Resource Management field. Elizabeth has an exceptionally broad background in the field of integrated wildlife and resource management, and her work experience includes employment with federal and state agencies as well as the private sector. Elizabeth specializes in the preparation environmental compliance documents for a variety of state and federal actions. At Stantec, Elizabeth is recognized as an expert on protected species and technical writing. She has provided environmental services for various types of projects throughout the U.S. She has developed her career skills with emphasis on the successful management of various natural resources (animals, plants, etc.) in conjunction with other resource demands (transportation, energy, minerals, timber, recreation, etc.). She has a solid understanding of ecological concepts and resource management techniques. She can competently review projects, assess their effects on resources, and develop and evaluate measures for minimizing effects.

EDUCATION

BS, Biology and Wildlife Management, Delaware State College, Dover, Delaware, 1991

MS, Wildlife Biology, University of Missouri, Columbia, Missouri, 1995

Habitat Conservation Planning for Endangered Species, US Fish and Wildlife Service, National Conservation Training Center, 2012

Integrating NEPA into FWS Activities, US Fish and Wildlife Service, National Conservation Training Center, 2011

Wildlife Hazard Management at Airports Certification, Embry-Riddle Aeronautics University, Daytona Beach, Florida, 2008 and 2010

Bat Acoustic Monitoring/Bat Conservation & Management Certification, Bat Conservation International, Austin, Texas, 2005

Federal Energy Regulatory Commission Training: Environmental Review and Compliance for Natural Gas Facilities, Pittsburgh, Pennsylvania, 2016

Section 7 of ESA Biological Assessments for Transportation Projects, Maine Department of Transportation, Augusta, Maine, 2015

REGISTRATIONS

Qualified Airport Biologist, Federal Aviation Administration 2017 – Present

Certified Wildlife Biologist #25063, The Wildlife Society 2006 - Present

MEMBERSHIPS

Member, The Wildlife Society

Member, The Wildlife Society, Maine

PROJECT EXPERIENCE

Natural Resource Services

New York State Article 10 Permitting and Compliance for Major Electric Generating Facilities
Stantec is assisting several wind project developers with meeting the application requirements for a certificate from the New York State Department of Public Service. Elizabeth prepares technical reports and sections of each application that address birds, bats, listed species, and cumulative effects. Projects include Cassadaga Wind Project, Baron Winds Project, Eight Point Wind Energy Center, and Deer River Wind Farm.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

South Fork Offshore Wind Farm, Rhode Island Sound

Stantec is assisting with the preparation of an application to the Bureau of Ocean Energy Management for the development of a wind farm in federal waters ~17 miles east of Block Island. Elizabeth is helping to analyze the existing conditions and potential effects of the proposed project on birds and bats.

Confidential Client, Wind Project, Iowa

Stantec conducted pre-construction surveys for a proposed wind project in northwestern Iowa. Elizabeth prepared the report that addresses bird use in the proposed project area.

Liquefied Natural Gas Import Terminal, Washington County, Maine

Stantec provided permitting assistance for an LNG terminal, regasification facility, and 30-mile send-out pipeline in Washington County, Maine. As Project Scientist, Elizabeth directed field investigations and provided chief assistance in the preparation of the FERC and State of Maine NRPA and SLODA applications for the project.

Natural Resource Damage Assessment, Commonwealth of Massachusetts

Stantec assisted the lead consultant in preparing a simplified approach for conducting natural resource damage assessment for wetlands affected by hazardous materials releases. As a co-author, Elizabeth researched and designed a method for assigning monetary value for affected wetlands. Research included an economic analysis and an investigation of affected wetlands in Massachusetts. Project was conducted in support of the Massachusetts Contingency Plan.

Wells Harbor Dredge Project, Wells, Maine

Stantec provided scientific and regulatory support for permitting a proposed dredge and beach nourishment project. As Project Manager, Elizabeth's tasks included biological resources assessment and project effects analyses. She also served as the Regulatory Specialist for this project. She coordinated state and federal agency participation in the project and prepared all attachments for the state NRPA and federal CWA permit applications.

Preliminary NRDA Screening for the Harvard-Denison Plant, Cleveland, Ohio

As a prerequisite to conducting a formal NRDA, Stantec conducted a pre-assessment screening for possible contaminant injuries and exposure pathways. Elizabeth reviewed historical reports and contaminant data relative to site activities, evaluated landscape conditions to relate the release area to potential exposure pathways, visited the site to classify possible receptors, and recounted findings to inform a conceptual site model.

Replier Park Playhouse Bowl Initial Study / Negative Declaration, Banning, California

Stantec provided CEQA permitting assistance for replacing an existing amphitheater. Elizabeth prepared the study report to determine whether the project would have a significant effect on the environment, identified measures to mitigate project impacts to a less than significant level, and developed the justification for the negative declaration. She also conducted the Housing and Urban Development.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Plan for Developing NH's Statewide Trail System for ATVs and Trail Bikes 2004-2008, New Hampshire

Stantec prepared a recreational plan for the State of New Hampshire. Elizabeth conducted a state-wide study of the wheeled off-highway vehicle trail system in New Hampshire. She then co-authored a plan to develop and maintain the trail system in anticipation of project future use. This effort also included conducting agency and public correspondence.

Surface Mining Projects*, Wyoming, Montana, and South Dakota

As a wildlife biologist, Elizabeth conducted wildlife surveys and prepared assessment reports for numerous mining projects in the short-grass prairie ecoregion. Surveys included those for American burying beetle, raptors, prairie grouse, passerines, ungulates, lagomorphs, small mammals, herps, fishes, and vegetation.

Environmental Impact Assessments

Beech Ridge Energy Wind Project Greenbrier County, West Virginia

Stantec was the third-party contractor preparing an Environmental Impact Statement to address the effects of a proposed Habitat Conservation Plan for two endangered bats likely to be affected by a 100-turbine wind project in the Appalachian Mountains. As a NEPA Specialist, Elizabeth's tasks included coordinating with the acting agency, preparing and reviewing the document, responding to public comments, and ensuring document compliance with NEPA.

Fowler Ridge Wind Project, Benton County, Indiana

Stantec was the third-party contractor in the preparation of an Environmental Impact Statement to address the effects of a proposed Habitat Conservation Plan for the endangered Indiana bat. The EIS reviews the effects associated with constructing up to 94 additional turbines at an existing 355-turbine wind project. The EIS evaluates the effects of alternative scenarios for conservation measures for the endangered bat. As a NEPA Specialist, Elizabeth's tasks included preparing and reviewing the document, and ensuring its compliance with NEPA.

Grande Prairie Wind Project, Holt County, Nebraska

Stantec was the third-party contractor in the preparation of an Environmental Impact Statement to address the effects of a 264-turbine wind project interconnecting with a WAPA transmission line. As a NEPA Specialist, Elizabeth's tasks included preparing and reviewing the document, and ensuring its compliance with NEPA.

Hoosac Wind Project, Berkshire and Franklin Counties, Massachusetts

Stantec assisted in the preparation of a permit application for a wind project in Florida and Monroe, Massachusetts. As Project Scientist, Elizabeth conducted a wildlife habitat evaluation and provided support to wetlands scientists in preparation of the State Notice of Intent for the electrical transmission tie-line. She also provided scientific support to the lead consultant and supervised implementation of the conservation management plan for the state-endangered large-leaved goldenrod for the turbine project.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Pioneer Trail Wind Project, Ford and Iroquois Counties, Illinois

Stantec was the third-party contractor in the preparation of an Environmental Assessment to address the effects of a proposed Habitat Conservation Plan for the endangered Indiana bat. The EA reviews the effects associated with operating a 94-turbine wind project and implementing mitigation measures. As a NEPA Specialist, Elizabeth's tasks included managing document preparers (resource specialists), compiling and reviewing the document, and ensuring document compliance with NEPA.

Wildcat Wind Project, Tipton and Madison counties, Indiana

Stantec prepared the Habitat Conservation Plan and Environmental Assessment for a wind project in central Indiana that applied for an incidental take permit for the endangered Indiana bat and threatened northern long-eared bat. Elizabeth worked with the USFWS to prepare the EA, which reviewed the effects associated with operating a 125-turbine wind project and implementing measures proposed in the HCP. As a NEPA Specialist, Elizabeth's tasks include coordinating with the USFWS, managing document preparers (resource specialists), compiling and reviewing the document, and ensuring document compliance with NEPA.

Confidential Wind Energy Project, Illinois

Stantec is third-party contractor for preparing an Environmental Assessment to address the effects of the implementation of a Habitat Conservation Plan on Indiana bat and northern long-eared bat. Elizabeth's tasks include managing document preparers (resource specialists), compiling and reviewing the document, and ensuring document compliance with NEPA.

Hoopeston Wind Project, Vermilion County, Illinois

Stantec was the third-party contractor in the preparation an Environmental Assessment to address the effects of a proposed Habitat Conservation Plan for the endangered Indiana bat and threatened northern long-eared bat. The EA reviews the effects associated with operating a 49-turbine wind project and implementing mitigation measures. As a NEPA Specialist, Elizabeth's tasks included coordinating with the USFWS, managing document preparers (resource specialists), compiling and reviewing the document, and ensuring document compliance with NEPA.

Confidential Wind Energy Project, Missouri

Stantec is third-party contractor for preparing an Environmental Assessment to address the effects of the implementation of a Habitat Conservation Plan on Indiana bat and northern long-eared bat. Elizabeth's tasks include managing document preparers (resource specialists), compiling and reviewing the document, and ensuring document compliance with NEPA.

Cape Wind Energy Project, Minerals Management Service, Massachusetts

Stantec assisted the Minerals Management Service (now the Bureau of Energy Management) in the preparation of an Environmental Impact Statement and Biological Assessment a wind resource area in Nantucket Sound, Massachusetts. As Project Scientist and Regulatory Specialist, Elizabeth helped prepare, review, and respond to agency and public comments on the avian and bat sections for the EIS and BA.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Forest Management Plan, Houlton Band of Maliseet Indians, Houlton and Littleton, Maine
Stantec prepared the forest management plan and Environmental Assessment for an Indian tribe in Maine. As the NEPA specialist, Elizabeth was responsible for reviewing the forest plan and assessing the Plan's potential effects on all resources in and within the vicinity of tribal trust lands.

Mount Rushmore, Badlands, and Death Valley National Parks Air Tour Management Plans, South Dakota and California
Stantec developed natural resource sections of Environmental Assessments evaluating multiple alternatives for commercial air tour operations at Mt. Rushmore National Memorial, Badlands National Park, and Death Valley National Monument. As Technical Lead, Elizabeth's tasks include natural resource data compilation and noise impacts analysis on wildlife pursuant to NEPA, ESA, and Wilderness Act.

Bison Herd Establishment, Wilmington, Illinois
Stantec is the third-party contractor preparing an Environmental Assessment to address the effects of establishing a bison herd at the Midewin National Tallgrass Prairie. As a NEPA specialist, Elizabeth is responsible for evaluating the proposed stages of herd establishment described in the Prairie's Bison Guide and analyzing the effects on the human environment.

Doppler Radar Tower, Lexington, Massachusetts
Stantec provided engineering and environmental services for a proposed high-resolution, Doppler radar tower at Hanscom Air Force Base. Elizabeth's was a co-author on the Environmental Assessment for the Air Force.

Providence River Siphon Interceptor Pipeline, Providence, Rhode Island
Stantec is the lead consultant for making improvements to wastewater infrastructure for the Narragansett Bay Commission. Elizabeth prepared the Environmental Assessment to accompany the client's application for Rhode Island's Clean Water Act State Revolving Fund.

Skowhegan Transportation Corridor Study, Skowhegan, Maine
Stantec assisted the lead consultant in reviewing potential environmental impacts associated with MaineDOT's proposed by-pass around Skowhegan. As Project Scientist and Regulatory Specialist, Elizabeth conducted field investigations and prepared the biological resources section in the NEPA document.

Relocate Damaged Maintenance Facilities on Sandy Hook, New Jersey
Stantec was the third-party contractor to the National Park Service for preparing an Environmental Assessment to address the effects of a proposal to relocate certain facilities that were damaged during Hurricane Sandy. The proposed action includes new construction and repurposing old buildings. As a Resource Specialist, Elizabeth prepared sections in the EA to address effects to general wildlife and threatened and endangered species.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Bear River Migratory Bird Refuge Access Road Improvements, Brigham City, Utah*

Project involved improved access road to refuge. Elizabeth prepared Wildlife Resource and Threatened and Endangered Species Sections for the Project's NEPA and ESA review documents. She also prepared the Biological Assessment. Project effects analysis included bald eagle and fat-whorled pondsnail.

Coalbed Methane Development, Colorado*

Elizabeth was on a team of third-party reviewers for a programmatic Environmental Impact Statement for coalbed methane projects in Southern Colorado. She reviewed sections on Wildlife, Vegetation, and Threatened and Endangered Species, and she also reviewed the Biological Assessment. Project effects analysis included the following species: bald eagle, southwestern willow flycatcher, Colorado pikeminnow, razorback sucker, and several plants (cacti, milkvetch, etc.). Elizabeth was responsible for reviewing the EIS for compliance with NEPA.

Sugarbush Development and Improvement Projects, Warren, Vermont*

Project involved trail and lodge improvements at the resort. Elizabeth prepared Revised Biological Assessment for federal threatened and endangered species pursuant to ESA and Biological Evaluation for US Forest Service sensitive species. Project effects analysis included the following species: Indiana bat, small-footed bat, and several odonates and plants.

Loon Mountain Ski Resort Expansion and Development, Lincoln, New Hampshire*

Project involved upgraded trails and new mountain development. Elizabeth prepared Wildlife Resource, Threatened and Endangered Species, and Biodiversity Sections for Project EIS pursuant to NEPA. She also prepared Biological Assessment pursuant to the ESA for federal threatened and endangered species and Biological Evaluation for US Forest Service sensitive species. Project effects analysis included the following species: Indiana bat, small-footed bat, Canada lynx, American marten, and several plants.

Jackson Hole Resort, Wyoming*

Project involved additional and upgraded trails and helicopter skiing option. Elizabeth prepared Wildlife Resource, Threatened and Endangered Species, and Biodiversity Sections for Project EA. She also prepared the Biological Assessment for federal threatened and endangered species and Biological Evaluation for US Forest Service sensitive species. Project effects analysis included the following species: grizzly bear, Canada lynx, and wolverine. Elizabeth was responsible for ensuring the EA was compliant with NEPA and the BA compliant with ESA.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Endangered Species/Species at Risk Assessments

Buckeye Wind Energy Project HCP, Champagne County, Ohio

Stantec provided assistance in developing a Habitat Conservation Plan for Indiana bat and assessing the environmental effects associated with Plan implementation. The potential environmental effects are in association with several alternatives for wind project operation. As a Biologist and Regulatory Specialist, Elizabeth's tasks included preparing the HCP and ensuring its compliance with Section 10 of ESA, preparing the preliminary EA pursuant to NEPA, and reviewing the applicability of a bat collision risk model.

Rare, Threatened, and Endangered Species Survey, U.S. Customs and Border Protection, Maine

U.S. Customs and Border Protection is updating their communications systems throughout Maine. Elizabeth conducted plant and animal surveys at more than 60 sites to provide information for the Tactical Communications Modernization Project's Biological Assessment. Surveys targeted Canada lynx, bald eagle, ringed boghaunter, and Furbish lousewort.

Dike Bridge Replacement, Machias, Maine

Stantec is assisting MaineDOT with permitting and engineering tasks associated with replacing 4 culverts on the Middle River in a tidal estuary. Elizabeth is preparing the biological assessment for three endangered fish, Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon and an essential fish habitat assessment. The documents address the effects of the bridge replacement on fish and fish habitat.

Mack Point Liquid Pier Expansion, Searsport, Maine

Stantec is assisting MaineDOT with permitting tasks associated with expanding facilities at a working coastal pier. Stantec conducted a site characterization of habitat for marine plants and animals and prepared a biological assessment for three endangered fish, Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon. Elizabeth prepared sections in the biological assessment.

Bridge Replacement and Highway Reconstruction, Phillips and Madrid, Maine

Stantec prepared a biological assessment that evaluated the effects on Atlantic salmon from a MaineDOT project for two bridge replacements and 4 miles of roadway reconstruction. The project is located along a river that provides spawning and rearing grounds for Atlantic salmon. Elizabeth worked with MaineDOT to assess project effects and develop avoidance and minimization measures to protect Atlantic salmon individuals and high-quality production habitat.

Line 63 Anomaly 89 Repair Project, Los Angeles County, California

As an ESA specialist, Elizabeth prepared the Biological Resources Technical Report to facilitate compliance with ESA and CEQA. The report evaluated potential impacts to federally and state-listed species resulting from an oil pipeline repair. The report addressed 7 plants and 17 animals, including unarmored threespine stickleback and arroyo toad.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Utica Marcellus Texas Pipeline Project Coordination Reports

Stantec was a subcontractor to the lead consultant for a proposed project to transport natural gas via a 964-mile interstate pipeline currently subject to the jurisdiction of the Federal Energy Regulatory Commission. Elizabeth assisted in the endangered species assessment and reporting for the pipeline in 7 eastern states.

Soucy Hill MaineDOT Highway 11 Road Improvements, Aroostook County, Maine

Working with Federal Highway Administration and MaineDOT, Stantec prepared a Biological Assessment addressing potential impacts of a transportation project on Canada lynx individuals and critical habitat and northern long-eared bat. Elizabeth was the ESA Section 7 specialist and agency coordinator for the project.

Durham Bridge Replacement, Durham and Lisbon, Maine

Working with Federal Highway Administration, MaineDOT, and the design engineer, Stantec prepared a Biological Assessment of the impacts of the bridge project on Atlantic salmon individuals and critical habitat. Elizabeth was the ESA Section 7 specialist and agency coordinator for the project.

Bridge and Highway Projects, Various Locations, Maine

Stantec assisted MaineDOT in the preparation of more than a dozen Biological Assessments pursuant to the ESA to address potential impacts of transportation projects on listed species throughout the state. Species included Atlantic salmon, Canada lynx, northern long-eared bat, shortnose sturgeon, and Atlantic sturgeon. Elizabeth was the ESA Section 7 specialist and agency coordinator for the BAs.

Programmatic Biological Assessment for Canada Lynx, Maine

Working with MaineDOT, Elizabeth is preparing a programmatic BA for routine transportation projects throughout the range and critical habitat for Canada lynx. Projects include stream crossing and road rehabilitation and improvement. Elizabeth is the ESA Section 7 specialist and agency coordinator for the project.

Capen Road Bridge Replacement, Gardner, Maine

Working with the design engineer, Stantec prepared a Biological Assessment of the effects of a bridge replacement project located within designated critical habitat for Atlantic salmon. The Biological Assessment pursuant to the ESA was part of the application process for an US Army Corps of Engineer's permit under Section 10 of the Rivers and Harbors Act.

Prefabrication Module Facility, Brewer, Maine

Stantec assisted in the preparation of environmental permit applications for a module fabrication facility on the Penobscot River. As Project Scientist and Regulatory Specialist, Elizabeth co-authored the Biological Assessment pursuant to the ESA that addressed endangered short-nosed sturgeon and Atlantic salmon.

Programmatic Biological Assessment for Atlantic Salmon, Maine

Working with MaineDOT, Elizabeth prepared a programmatic BA for routine transportation projects throughout the range and critical habitat for Atlantic salmon. Projects include culvert and bridge rehabilitation and replacement. Elizabeth was the ESA Section 7 specialist and agency coordinator for the project.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Bangor Landing, Bangor, Maine

Stantec assisted in preparing environmental permit applications for limited remedial dredging and construction of a trapping cap for non-aqueous phase liquid contaminants at Bangor Landing. As Project Scientist and Regulatory Specialist, Elizabeth co-authored the Biological Assessment to assess the impact of the project on the endangered shortnose sturgeon and Atlantic salmon pursuant to Section 7 of the ESA.

Occidental Oil and Gas, Western San Joaquin Valley, California

As an ESA specialist, Elizabeth assisted in the preparation of a biological assessment to evaluate potential impacts to federally listed and BLM sensitive species resulting from oil and gas activities in the San Joaquin Valley. Species included San Joaquin kit fox, blunt-nose leopard lizard, giant kangaroo rat, and several others.

Airport Wildlife Hazard Assessment and Management

Wildlife Hazard Assessment and Management Plan, Pellston Regional Airport, Pellston, Michigan
Stantec is the lead consultant for the Pellston Regional Airport. As an FAA Qualified Airport Biologist, Elizabeth is assessing wildlife and habitat conditions at the airport. She is overseeing field surveys and working with other staff biologists to prepare the hazard assessment and management plan, both of which will help the airport to minimize and mitigate hazardous wildlife that may compromise safe operation of the airport.

Wildlife Hazard Assessment and Management Plan, Robert LaFleur Airport, Waterville, Maine

Stantec is the lead consultant for the City of Waterville's municipal airport. As a Qualified Airport Biologist, Elizabeth is assessing wildlife and habitat conditions at the airport. She is overseeing field surveys and preparing the hazard assessment and management plan, both of which will help the airport to minimize and mitigate hazardous wildlife that may compromise safe operation of the airport.

Wildlife Hazard Assessment and Management Plan, Lawrence Municipal Airport, North Andover, Maine

Stantec is the lead consultant for the Lawrence Municipal Airport runway safety project. As Project Scientist, Elizabeth conducted a wildlife hazard assessment for the airport. She co-authored the report describing the circumstances for wildlife at LWM along with the management plan to address wildlife hazards that are a potential threat to airport operations.

Airport Wildlife Hazard Assessment and Management Plan, Knox County Airport, Owls Head, Maine

Stantec is the lead consultant for the Knox County Airport expansion project. As Project Scientist, Elizabeth conducted a wildlife hazard assessment for the airport. She also prepared a management plan to address wildlife hazards that are a potential threat to landing and departing aircraft at the airport.

** denotes projects completed with other firms*

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

Airport Wildlife Hazard Site Visit, Elizabethtown Regional Airport, Kentucky

Stantec is the engineering consultant for a general aviation airport in central Kentucky. Elizabeth conducted a site visit and prepared recommendations to the airport addressing mitigation for hazardous wildlife.

Wildlife Hazard Site Visits

Plymouth Municipal Airport, New Hampshire

Houlton Municipal Airport, Maine

Dexter Municipal Airport, Maine

Stantec is the lead consultant for several airport improvement projects in New England. Elizabeth conducted 2-3-day site visits at each of these airports to assess wildlife risks to aircraft and determine the necessity for hazard management plans.

Elizabeth M. Annand

Project Manager, Certified Wildlife Biologist, Qualified Airport Biologist

PUBLICATIONS

Nichols, JD, LL Bailey, AF O'Connell, NW Talancy, EH Campbell Grant, AT Gilbert, EM Annand, TP Husband, and JE Hines. Multi-scale occupancy estimation and modeling using multiple detection methods. *Journal of Applied Ecology*, 2008.

Gilbert, AT, AF O'Connell, Jr., JR Sauer, JD Nichols, and EM Annand. Inventory of terrestrial mammals at National Parks in the Northeast Temperate Network and Sagamore Hill NHS. USGS Technical Report Series, 2007.

Annand, EM, and FR Thompson, III. Forest Bird Response to Regeneration Practices in Central Hardwood Forests. *Journal of Wildlife Management*, 61:159-171, 1997.

Donovan, TM, PW Jones, EM Annand, and FR Thompson, III. Variation in Local-Scale Edge Effects: Mechanisms and Landscape Context. *Ecology*, 78:2064-2075, 1997.

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

GIRISH BEHAL, PMP

DIRECTOR—STRATEGIC INITIATIVES AND DEVELOPMENT

SNC-LAVALIN

1 **Q: Please state your name, employer, and business address.**

2 A: Girish Behal, PMP, SNC-Lavalin, 150 State Street, Suite 120, Rochester, New York, 14614.

3 **Q: What is your position at SNC-Lavalin?**

4 A: Director—Strategic Initiatives and Development.

5 **Q: How long have you been employed with SNC-Lavalin?**

6 A: I have been employed with SNC-Lavalin since 2011.

7 **Q: Please describe your educational background and professional experience.**

8 A: I received a Diploma and Bachelor of Civil Engineering from Maharaja Sayajirao University, Baroda,
9 Gujarat, India. I also received a Graduate Certificate in Power Systems and a Master of Science in
10 Electrical and Computer Engineering (Power Systems) from Worcester Polytechnic Institute. In 2017,
11 I received a Master of Business Administration from the Simon Business School, University of
12 Rochester. I have more than 14 years of experience in onshore and offshore renewables,
13 transmission and distribution projects for voltage levels from 11 kV to 345 kV, involving substation,
14 overhead and underground transmission lines. My curriculum vitae is attached.

15 **Q: Please describe your current responsibilities with SNC-Lavalin.**

16 A: I am responsible for leading and managing project development in the area of onshore and offshore
17 renewables, portfolio management of key projects in the area of FERC 1000, interregional
18 transmission planning, and strategic due diligence. I also provide project-specific oversight to the
19 engineering teams that perform interconnection analysis, congestion analysis and additional studies
20 and engineering to support projects in the power sector.

21 **Q: Have you previously testified before the New York State Public Service Commission or Siting
22 Board on Electric Generation?**

23 A: No. However, I have been designated to provide testimony in the following proceedings that are
24 currently pending before the Siting Board on Electricity Generation and have submitted prefiled

25 testimony to the Siting Board in those proceedings: Bluestone Wind Energy Facility (Case No. 16-F-
26 0559) and Galloo Island Wind Energy Facility (Case No. 15-F-0327).

27 **Q: Have you previously served as an expert witness before any other court, agency, or other**
28 **body on the subject you plan to offer testimony on today?**

29 A: I have testified in various local and state proceedings, as listed below, as it relates to the siting of
30 power facilities:

31 2013 Station 251 Project, Town of Brighton Planning Board, Brighton, New York

32 2011 Station 124 Expansion Project, Town of Penfield, Planning and Zoning Commission,
33 Penfield, New York

34 2010 New 115-kV Substation, Connecticut Siting Council, Westport, Connecticut

35 2010 115-kV Circuit Separation Project, Massachusetts Department of Public Utilities, Boston,
36 Massachusetts

37 2008 New 115-kV Substation, Connecticut Siting Council, Waterford, Connecticut

38 2006 New 115-kV/11.5-kV Substation, Connecticut Siting Council, New Britain, Connecticut

39 **Q: What is the purpose and scope of your testimony in this proceeding?**

40 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

41 **Q: What portion(s) of the Application is your testimony sponsoring?**

42 A: Exhibit 5, Electric System Effects; Exhibit 8, Electric System Production Modeling; and Exhibit 10
43 Consistency with Energy Planning Objectives.

44 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
45 **and supervision.**

46 A: Yes.

47 **Q:** **In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
48 **documents produced by persons other than yourself/your company? If so, please cite these**
49 **sources. [These are independent studies, etc.]**

50 **A:** See Exhibits 5, 8 and 10 for any references.

51 **Q:** **Does this conclude your testimony?**

52 **A:** Yes.

Mr. Girish Behal, PMP, has more than 17 years of experience in a variety of onshore and offshore renewables, Transmission and Distribution projects for voltage levels from 11 kV to 345 kV, involving substation, overhead and underground transmission lines, Statcom, Static Var Compensator and Phase shifting transformers. Mr. Behal also has experience working on hydrocarbon refinery projects in an Engineering Procurement Construction (EPC) environment. His responsibilities have included Project Development, Project Management, Contract Management and Negotiation, Engineering Management, planning, coordination of various disciplines, construction supervision and outage management. Mr. Behal's current focus is to provide value-added development solutions for HVAC and HVDC transmission, onshore and offshore renewables and FERC 1000 project development in the United States utilizing his engineering and business experience. Prior to that, he has managed several transmission and distribution projects from project scope definition, including initial system planning studies, to commissioning and closeout, including managing a group of Project Managers and teams to support client needs. Mr. Behal has experience with siting and permitting of Transmission and Distribution facilities including representing the client in front of regulatory and public agencies. Mr. Behal is a creative problem solver with a keen ability to resolve project issues

SECTORS OF EXPERTISE

Oil & Gas	› Petroleum Refining; Petrochemicals
Complementary sectors	› Professional / Consulting Services
Power	› Power Transmission and Distribution; Wind, Solar and Tidal Power
Additional Expertise	› Due diligence ; Building & Leading Multi-disciplined Teams; Contract Negotiation and Management

Years of Experience

- › 17 years

Years with SNC-Lavalin

- › 7 years

Key Positions

- › Director
- › Project Manager
- › Senior Project Manager

Languages

- › English
- › Hindi

EDUCATION

2017	Master of Business Administration, Simon Business School , University of Rochester, Rochester, New York, United States
2011	Master of Science in Electrical and Computer Engineering (Power Systems), Worcester Polytechnic Institute, Worcester, Massachusetts, United States
2009	Graduate Certificate in Power Systems, Worcester Polytechnic Institute, Worcester, Massachusetts, United States
1999	Bachelor of Civil Engineering, Maharaja Sayajirao University, Baroda, Gujarat, India
1995	Diploma in Civil Engineering, Maharaja Sayajirao University, Baroda, Gujarat, India

EXPERIENCE

SINCE 2011	SNC-LAVALIN, ROCHESTER, NEW YORK, UNITED STATES <i>Clean Power</i>
Since 2017	Director - Strategic Initiatives and Development › Lead and Manage Client and Project Development in the area of onshore and offshore Renewables › Portfolio management of key projects in the area of transmission planning, strategic

- due diligences
- › Lead, Mentor and Manage multi-location and multi-cultural project teams for Project Execution
- › Grow, maintain and manage client relationships

2015 - 2017

Power Transmission & Distribution - Montreal
Senior Project Manager – Strategic Initiatives

Lead and Manage Project Development in the area of onshore and offshore Renewables, portfolio management of key projects in the area of FERC 1000, Inter-regional transmission planning mandates and strategic due diligences
 Lead, Mentor and Manage multi-location and multi-cultural project teams for Project Execution
 Grow, maintain and manage client relationships
 Create cross functional teams to address client needs
 Support Organization's key strategic growth initiatives

Project Manager, SPP-MISO Interregional Model Development , Strategic Planning, Confidential, United States (06/2016 - 02/2017)

The Client Mandated SNC-Lavalin to create an inter-regional system model and perform production cost analysis utilizing PROMOD to evaluate interregional transmission project opportunities for SPP and MISO.

Galloo Island Wind Project , Planning, Apex, New York, United States (11/2016 - 02/2017)

SNC-Lavalin performed production cost analysis utilizing Promod for the New York State Department of State Article X filing to support the project.

Project Manager, South Fork Offshore Wind Farm , Preliminary engineering, Deep Water Wind South Fork LLC, New York, United States (07/2017)

South Fork Wind Farm (SFWF) is a 90 MW offshore wind farm connecting to Long Island. It is a unique project that entails a very long undersea cable for the interconnection to the project point of interconnection.

2012 - 2015

Power Transmission & Distribution - Calgary
Senior Project Manager

- › Lead, mentor and manage a group of project managers and project teams in the planning, execution and management of a portfolio of mid to large size brown field and green field substation and transmission line capital projects.
- › Managed team to deliver CAPEX portfolio value of \$58.9M, \$51.3M and \$67.4M for the years 2012, 2013 and 2014 to the client.
- › Recruit and retain project team members including Project Managers, Construction and Commissioning Managers, Engineers and Project Support staff.
- › Direct project leadership on specific projects.
- › Maintain and manage client relationships for a portfolio of projects currently managed by SNC-Lavalin.
- › Support marketing and business development efforts as needed.

Site Experience

- › India
- › United States

Computer Applications

- › Primavera
- › Microsoft Project
- › Microsoft office suite
- › Lotus Notes
- › SAP
- › Autocad

Project Manager, Station 124 Phase Shifting Transformer, Project Management, Iberdrola USA, Penfield, New York, United States, CA \$34 000 000 (03/2012 - 08/2014)

The project involved engineering, procurement and construction of two (2) 115 kV, + 20% Phase Shifting Transformers, 138/184/230 MVA at station 124 in RG&E territory to comply with FERC ruling. The project was required to support 20% increase in the power output from the interconnected Nuclear station facilities. This project involved major expansion of existing facilities. The substation (Station 124) also required significant Federal State and Local environmental permitting.

- › Completed Project ahead of schedule and under budget.
- › Completed complex outage during the nuclear unit outage and avoiding future outages that would require down powering of the unit.

Rochester Gas and Electric Program Portfolio, Project Management, Iberdrola USA, New York, United States (03/2012 - 12/2014)

Managed a group of Project Managers to deliver a portfolio of projects to the Client at various voltages and various stages of project lifecycle. The team delivered variety of projects from substation upgrades to major expansions of the transmission and distribution system.

Delivered CAPEX portfolio value of \$58.9M, \$51.3M and \$67.4M for the years 2012, 2013 and 2014 to the client.

Station 124 Static Var Compensator , Project Management, Iberdrola USA, Penfield, New York, United States, CA \$30 500 000 (04/2012 - 08/2013)

Engineer, procure and construct a -100/+200 MVAR Static Var Compensator (SVC) at Station 124 to provide reliability support in the area. The SVC is installed at 14kV and connected to the 115 kV system through two (2) 200 MVA transformers. This project involved significant expansion of existing Station 124 resulting in needs for Federal, State and local environmental permitting.

- › Completed the project on schedule and on budget
- › Negotiated savings to the tune of US\$ 140K for the client on change orders for the contractors
- › Resolved significant technical design issues to ensure the functionality of the system being installed.

2011 - 2012

Project Manager

- › Developed project scope, budget and schedule for electrical transmission capital improvement projects.
- › Managed and delivered technically complex key projects to the client on schedule
- › Built rapport with client's management and staff gaining their trust and confidence.
- › Represented the client organization in public and regulatory forums.
- › Collaborated with cross functional teams in developing, evaluating and recommending contracts and procurement of equipment and services.
- › Assembled and directed a distributed project execution team in a Multi-Office Execution arrangement.

Project Manager, Substation Automation Project , Project Management, Iberdrola USA, Rochester, New York, United States, CA \$36 000 000, Multiple (08/2011 - 04/2012)

The project mandate was to create the project scope of work documents, project estimates and project schedule for the client for various automation upgrades for 12 substations. The mandate included pre-conceptual engineering for the project.

- › Project estimates and scopes delivered to the client on schedule and on budget.
- › Exceeded client CAPEX goals for the project.



GIRISH BEHAL, PMP

University of Rochester Substation Project , Project Management, Iberdrola USA, Rochester, New York, United States, CA \$28 000 000, 115 kV/12 kV, 3000 Amp rated substation (08/2011 - 12/2012)

The University of Rochester (U of R) has requested additional supply to be provided by RG&E to serve its projected growth load and resolve reliability issues. The substation will be a new 115 kV/11.5 kV breaker and a half substation with two (2) 115 kV/11.5 kV 70 MVA transformers. Remote work is planned at stations 33, 82, and Mortimer/National Grid for line protection. Fiber optics will be installed from station 251 to stations 33, 82, and Mortimer for communications.

- › Project Option Evaluations completed on schedule and under budget.
- › Lead the project team through successful project siting process.

Station 124 Phase Shifting Transformer, Project Management, Iberdrola USA, Penfield, New York, United States, CA \$34 000 000 (12/2011 - 12/2012)

The project involved engineering, procurement and construction of two (2) 115 kV, + 20% Phase Shifting Transformers, 138/184/230 MVA at station 124 in RG&E territory to comply with FERC ruling. The project was required to support 20% increase in the power output from the interconnected Nuclear station facilities. This project involved major expansion of existing facilities. The substation (Station 124) also required significant Federal State and Local environmental permitting.

Completed Project ahead of schedule and under budget.

Completed complex outage during the nuclear unit outage and avoiding future outages that would require down powering of the unit.

Station 124 Static Var Compensator Project, Project Management, Iberdrola USA, Penfield, New York, United States, CA \$30 500 000, -100/+200 MVAR SVC (12/2011 - 12/2012)

Engineer, procure and construct a -100/+200 MVAR Static Var Compensator (SVC) at Station 124 to provide reliability support in the area. The SVC is installed at 14kV and connected to the 115 kV system through two (2) 200 MVA transformers. This project involved significant expansion of existing Station 124 resulting in needs for Federal, State and local environmental permitting.

- › Completed the project on schedule and on budget
- › Negotiated savings to the tune of US\$ 140K for the client on change orders for the contractors
- › Resolved significant technical design issues to ensure the functionality of the system being installed.

Project Manager, Station 124-42-204 Fiber , Project Management, Iberdrola USA, Rochester Area, New York, United States, CA \$1 750 000 (12/2011 - 12/2012)

Design, permit, procure and install 24.2 miles of fiber for system protection communication between station 124, 42 and station 204.

Project completed under budget

2004 - 2011

NORTHEAST UTILITIES SERVICE COMPANY, BERLIN, CONNECTICUT, UNITED STATES

Transmission Business Projects

2006 - 2011

Project Lead

- › Responsible for development of project scope, budget, schedule performance for assigned electrical transmission capital improvement projects.
- › Responsible for representing the organization in public and regulatory forums.
- › Responsible for assembling and leading a diverse, multifunctional project team consisting of internal company employees, contractors, consultants to effectively and efficiently deliver projects on time.

- › Responsible for establishing outage dates and coordinating outages with system operators and the outage teams.
- › Responsible for creating detailed project schedules, including identification of major milestones, for overseeing, controlling, communicating and managing all activities required to complete assigned transmission system capital improvement projects.
- › Responsible for monitoring and controlling project costs through preparation of monthly cash flows, verification of actual or committed costs to estimated costs and identification of cost variances that require further action to ensure completion within budget.
- › Responsible for working with cross functional teams in developing, evaluating and recommending construction contracts and procurement of high value project specific equipment and services.

Project Manager, Hollow Core and Obsolete Equipment Replacement Program, Project Management, Northeast Utilities (CL&P and WMECO), Multiple, Connecticut, United States, CA \$170 000 000, 115 kV/345-kV (10/2010 - 05/2011)

This program was a five year system wide equipment replacement program which involved replacement of obsolete equipment in both 115-kV and 345-kV systems across 80 plus substations in two operating companies owned by Northeast Utilities.

- › Created an extensive program execution plan
- › Managed and negotiated long term outage plan for multiple stations
- › Managed and negotiated work agreements with union workforce

Project Manager, Sherwood Substation, Project Management, Northeast Utilities (CL&P), Westport, Connecticut, United States, CA \$23 860 000 (03/2010 - 05/2011)

Build a new greenfield substation 115-13.8 kV to support local load growth. The project involved tapping into the existing 115-kV lines and adding two 115-13.8 kV auto-transformers and four switchgear units.

- › Successfully lead the permitting of the new Substation
- › Managed critical relationships with neighboring property owners

Project Manager, IEC 61850 Simulator Laboratory Program, Project Management, Northeast Utilities, Berlin, Connecticut, United States, CA \$2 500 000 (04/2009 - 08/2010)

Design and implement a prototype IEC 61850 technology laboratory to create standards and implementation across the Northeast Utilities organization. This project involved a new technology for the organization, significant organization change and learning implementation in addition to establishment of the laboratory.

- › Successfully tested and implemented a new technology

Project Manager, Waterford Substation, Project Management, Northeast Utilities, Waterford, Connecticut, United States, CA \$25 000 000 (08/2007 - 05/2010)

Build a new greenfield substation 115-27.6 kV to support local load growth. The project involves tapping into the existing 115-kV lines and adding two 115-27.6 kV auto-transformers.

- › Successfully led the project team through permitting process.
- › Complex remote end work completed within the tight project schedule.

Project Manager, Critical Infrastructure Protection program, Project Management, Northeast Utilities, Connecticut, United States, CA \$24 000 000 (02/2008 - 05/2009)

This project involves creating separate communication networks, modifications to existing systems and enhancing physical security for critical cyber assets across three states (Service Territories).

- › Completed project under budget and on schedule

- › Ensured compliance with regulatory requirements
- › Managed multi-locational teams

Project Manager, Ludlow Auto Transformer Replacement , Project Management, Northeast Utilities, Ludlow, Massachusetts, United States, CA \$10 250 000, 345 kV (09/2007 - 12/2009)

Design, procure and install three-single phase 200 MVA units at Ludlow in spare position for connections at a later date.

- › Project Completed on schedule and budget.

Project Manager, Wilton Substation, Project Management, Northeast Utilities, Wilton, Connecticut, United States, CA \$11 500 000 (11/2006 - 05/2008)

Build a new greenfield 115-27.6 kV Substation for local load growth. The project involves tapping into the existing 115-kV lines and adding two 115-27.6 kV auto-transformers. The most unique part of the project is extremely small construction site bordered by wetlands with species of special concern.

- › Complex construction due to limited space.

Project Manager, Devon Substation Upgrade Project , Project Management, Northeast Utilities, Milford, Connecticut, United States, CA \$8 520 000, 115-kV (04/2006 - 10/2008)

The project involves replacement of existing equipment and addition of new equipment for increase in thermal ratings and reliability of the station. The most unique part of the project is to enable reliable supply to the distribution system downstream with multiple concurrent and overlapping equipment outages.

- › Completed complex outage schedule (72+ outages) with Zero incidents
- › Negotiated and awarded lump sum construction contract for construction resulting in change orders less than 3% of the contract value.

Assistant Project Manager, Bethel to Norwalk Project , Project Management, Northeast Utilities , Connecticut, United States, CA \$397 000 000 (01/2006 - 08/2006)

Build a new 345-kV overhead and underground Transmission line between Danbury, CT and Norwalk CT with two transition stations. Re-conductor and upgrade existing 115 kV lines. Build new 115 kV line. Install two 400MVA shunt reactors to the system. Build extensive upgrades and expansions for Substations in Norwalk CT and Danbury CT including two new 345-kV GIS substations.

2005 - 2006

Transmission Business Projects
Associate Engineer/Project Lead

- › Responsible for development of project scope, budget, schedule performance for assigned electrical transmission capital improvement projects.
- › Responsible for representing the organization in public and regulatory forums.
- › Responsible for assembling and leading a diverse, multifunctional project team consisting of internal company employees, contractors, consultants to effectively and efficiently deliver projects on time.
- › Responsible for establishing outage dates and coordinating outages with system operators and the outage teams.
- › Responsible for creating detailed project schedules, including identification of major milestones, for overseeing, controlling, communicating and managing all activities required to complete assigned transmission system capital improvement projects.
- › Responsible for monitoring and controlling project costs through preparation of monthly cash flows, verification of actual or committed costs to estimated costs and identification of cost variances that require further action to ensure completion within budget.

- › Responsible for working with cross functional teams in developing, evaluating and recommending construction contracts and procurement of high value project specific equipment and services.

Assistant Project Manager, Bethel to Norwalk Project , Project Management, Northeast Utilities, Connecticut, United States, CA \$397 000 000, 115-kV, 345-kV (09/2005 - 08/2006)

Build a new 345-kV overhead and underground Transmission line between Danbury, CT and Norwalk CT with two transition stations. Re-conductor and upgrade existing 115 kV lines. Build new 115 kV line. Install two 400MVA shunt reactors to the system. Build extensive upgrades and expansions for Substations in Norwalk CT and Danbury CT including two new 345-kV GIS substations.

2004 - 2005

Transmission Business Projects
Assistant Engineer

- › Complete responsibilities for assigned portions of project management responsibilities.
- › Assist Project Manager in developing and evaluating construction contracts and procurement of high value items like Shunt Reactors.
- › Assist Project Managers in managing overall scope, budget and schedule of high profile electrical transmission projects including schedule adherence, project communications and projects engineering, design and construction services.
- › Coordinate project team efforts with maintenance for project turnover to maintenance.
- › Perform technical and commercial review and provide recommendation to the management for project changes.
- › Performed first line technical and commercial approval of contractor invoices.
- › Performed technical and commercial review of bids.

Assistant Project Manager, Bethel to Norwalk Project , Project Management, Northeast Utilities, Connecticut, United States, CA \$397 000 000 (2004 - 09/2005)

Build a new 345-kV overhead and underground Transmission line between Danbury, CT and Norwalk CT with two transition stations. Re-conductor and upgrade existing 115 kV lines. Build new 115 kV line. Install two 400MVA shunt reactors to the system. Build extensive upgrades and expansions for Substations in Norwalk CT and Danbury CT including two new 345-kV GIS substations.

2003 - 2004

CURTIS PARTITION CORP, NEW YORK, NEW YORK, UNITED STATES
Project Engineer

- › Assist project managers in daily field operations including manpower allocations, create and track RFI's submitted to GC, attend project meetings, prepare project catch-up plans.
- › Evaluate general contractor schedule, prepare resource-loaded schedule for the company to assist in manpower optimization.
- › Evaluate new project management software's and recommend project management software for organization wide implementation.

1999 - 2001

LARSEN & TOUBRO LTD, BARODA, GUJARAT, INDIA
Project Engineer

- › Assisted project manager in preparation of project progress reports, scheduling, schedule updating, vendor follow up and contractor invoice processing.
- › Assisted project manager in consolidating change order documentation.
- › Coordinated with client/owner's engineers, detail engineering contractor, site engineering for design review and drawing submittal etc. at design/build refinery project site.
- › Reviewed and processed site and contract related drawings and documentation (RFI's).
- › Construction observation, inspection and issuance of rectification "punch lists".
- › Assisted engineering manager in project engineering issues, including discussions and clarifications of contractual and

technical issues with detail engineering
subcontractor for shop drawings review.

- › Provided field support for preparation of "As-Built" drawings.
- › Technical discussions and clarifications with engineering and vendor as required.

Assistant Project Manager, Milk Powder Plant and Liquid Milk Plant expansion Project, Project Management, National Dairy Development Board (NDDB), Banaskantha, Gujarat, India, CA \$29 540 000 (08/2000 - 07/2001)

This project was an Engineering Procurement and Construction contract for design, supply and construction Liquid Milk Plant (35MMTPA) and Milk Powder plant (20MMTPA). This was expansion project.

Assistant Project Manager, Hydrogen plant, De-Hydrogenisation De-sulphurisation plant, Offsite and Utilities Package, Project Management, Hindustan Petroleum Corporation Limited, Vishakhapatnam, Odisha, India, CA \$261 000 000 (07/1999 - 09/2000)

: This project was an Engineering Procurement and Construction contract for design, supply and construction of Hydrogen plant, De-Hydrogenisation De-sulphurisation plant including all related offsite and Utilities as needed for Plant operation.

PROFESSIONAL ASSOCIATIONS

SINCE 2015	Institute of Electrical & Electronic Engineers, Membership no. 93512798
SINCE 2007	Project Management Institute (PMI), Membership no. 1021284

PROFESSIONAL DEVELOPMENT

2007	Certificate in Project Management, Boston University, Boston, Massachusetts, United States
2007	Project Management Professional, Project Management Institute, Newtown Square, Pennsylvania, United States

ADDITIONAL TRAINING

2013	Leadership Training, Knightsbridge, Toronto, Ontario, Canada
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PUBLICATIONS AND PRESENTATIONS

HVDC - Powering the Future, Rochester, United States, 2017

Eroding Values and Emerging Ethical Issues in contemporary Indian Management, Baroda, Gujarat, India, 2000

Environmental Impact Assessment Methodologies: Critical Review, Jhansi, Uttar Pradesh, India, 1998

COMMITTEES

SINCE 2015	WG 15.05.08 HVDC and FACTS Economics and Operating Strategies, United States
SINCE 2015	WG 15.05.18 Studies for Planning of HVDC
SINCE 2015	WG 15.05.19 Practical Technologies for VSC HVDC Systems

DIRECTORSHIPS

SINCE 2017 | Co- Vice Chair

AWARDS AND SCHOLARSHIPS

2015	The Simon School of Business Scholarship (25% tuition fees), University of Rochester, Rochester, New York, United States
2001	University Fellow, The Ohio State University, Columbus, Ohio, United States
2000	First place in Young Managers Competition, Baroda Management Association, Baroda, Gujarat, India
1999	Express Group Gold Medal, The Maharaja Sayajirao University, Baroda, Gujarat, India
1999	Shri K H Patel Gold Medal, The Maharaja Sayajirao University, Baroda, India
1999	Late Friend (Dr.) Piyush Parikh Gold Medal Fund, The Maharaja Sayajirao University of Baroda, Baroda, India

ACADEMIC POSTS

2002 - 2003 | Graduate Research Assistant, The Ohio State University, Columbus, Ohio, United States

PUBLIC HEARINGS

2017	Pre-filed Testimony for Article 10, Exhibit 8 for Case 15-F-0327 for Galloo Island Wind Energy Facility, New York State Department of Public Services, United States
2013	Station 251 Project, Town of Brighton Planning Board, Brighton, New York, United States
2011	Station 124 Expansion Project, Town of Penfield, Planning and Zoning Commission, Penfield, New York, United States
2010	New 115-kV substation in Westport, CT, Connecticut Siting Council, Westport, Connecticut, United States
2010	115-kV Circuit Separation Project, Massachusetts Department of Public Utilities, Boston, Massachusetts, United States
2008	New 115-KV Substation in Waterford, CT, Connecticut Siting Council, Waterford, Connecticut, United States
2006	New 115 kV/11.5 KV substation, Connecticut Siting Council, New Britain, Connecticut, United States

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

JOANNE J. BLANK,

SENIOR SCIENTIST AND PROJECT MANAGER

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Joanne J. Blank, Stantec Consulting Services, Inc. (Stantec), 30 Park Drive, Topsham, ME 04086.

3 **Q: What is your position at Stantec?**

4 A: I am a Senior Scientist and Project Manager at Stantec.

5 **Q: How long have you been employed by Stantec?**

6 A: I began working for the engineering, planning and environmental science firm Bonestroo, Inc. in
7 2010. Bonestroo was acquired by Stantec in 2011.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Science in atmospheric and oceanic sciences and Masters of Science in
10 atmospheric and oceanic sciences and environmental monitoring from the University of Wisconsin
11 in Madison. Over the course of my career, I have been involved in the design and permitting of more
12 than 3.0 GW of wind and other renewable energy projects. My specific responsibilities have included
13 preparing feasibility analyses, wind energy and environmental permit applications and
14 decommissioning plans, conducting noise and shadow flicker analyses, preparing Federal Aviation
15 Administration determination applications, conducting Phase I site assessments, property surveys,
16 and other on-site studies, overseeing post-construction compliance, and providing expert testimony
17 and public meeting support. I also have provided environmental permitting and other support on
18 several natural gas pipeline projects. Prior to joining Stantec, I was employed at AECOM as a Senior
19 Project Manager/Senior Scientist, where I was also involved in the study and permitting of renewable
20 energy projects. A copy of my resume is attached.

21 **Q: Please describe your current responsibilities with Stantec.**

22 A: While at Bonestroo and Stantec, I have worked primarily on power and transmission projects with a
23 focus on the study and permitting of natural gas, transmission and renewable energy projects,

including numerous wind energy facilities. Among other things, I have prepared sound and shadow flicker studies and decommissioning plans for numerous large scale wind energy projects across the Midwest. I also have managed environmental permitting, prepared various studies and reports and provided other support for major wind and solar energy projects. Of particular reference, I have conducted shadow flicker modeling for numerous wind energy projects.

Q: Have you previously testified before the New York State Public Service Commission or Siting Board on Electric Generation?

A: No.

Q: Have you previously served as an expert witness before any other court, agency, or other body on the subject you plan to offer testimony on today?

A: Yes, I have testified and/or served as an expert witness on other wind energy projects, including:

- Highland Wind Farm (Public Service Commission [PSC] of Wisconsin; PSC Docket No. 2535-CE-100) – Included testimony on shadow, sound and transportation studies and environmental assessment and permitting of project.
- Twin Forks/Radford Run Wind Farm (Macon County, Illinois) – Shadow study.
- Pleasant Creek Wind Farm (Livingston County, Illinois) – Shadow study and decommissioning plan.
- Kenowa Ridge Wind Farm (Casnovia Township, Michigan) – Shadow and sound studies.

In addition, I have testified at numerous county and municipal-level permit hearings regarding shadow and/or sound studies in Illinois, Michigan, Iowa, and South Dakota.

Q: What is the purpose and scope of your testimony in this proceeding?

A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

Q: What portion(s) of the Application is your testimony sponsoring?

47 A: Exhibit 15, Public Health and Safety (shadow flicker) and Exhibit 24 (shadow flicker).

48 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
49 **and supervision.**

50 A: Yes.

51 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
52 **documents produced by persons other than yourself/your company? If so, please cite these**
53 **sources. [These are independent studies, etc.]**

54 A: References, if any, are provided in the Exhibits identified above.

55 **Q: Does this conclude your testimony?**

56 A: Yes.

JoAnne serves as a senior scientist in the Energy Market Sector, specializing in feasibility, permitting and compliance of power and renewable energy projects across the United States. She has been involved in the design and permitting of more than 3.0 GW of wind and other renewable energy projects. Her project and management experience include federal, state and local permitting, feasibility analyses, expert witness testimony, project siting, shadow/flicker analyses, sound studies, environmental permitting, NEPA documents (EA and EIS), CPCN and CA applications, FAA permits, preliminary engineering design, Phase I site assessments, property surveys, erosion control plans, geospatial information analysis and management, and post-construction compliance. JoAnne's management experience with contractors, utilities, regulatory agencies and energy developers has provided her with a broad understanding of the processes and requirements necessary for the successful development, monitoring and post-construction compliance of energy projects.

EDUCATION

Master of Science Atmospheric and Oceanic Sciences, University of Wisconsin, Madison, Wisconsin, 2000

Master of Science Environmental Monitoring, University of Wisconsin - Nelson Institute for Environmental Studies, Madison, Wisconsin, 2000

Bachelor of Science Atmospheric and Oceanic Sciences, University of Wisconsin, Madison, Wisconsin, 1996

Photovoltaics – Design and Siting, Northeast Wisconsin Technical College, Green Bay, Wisconsin, 2010

FERC Environmental Compliance Seminar, 2014

FERC Regulatory Overview and Guidance Seminar, 2014

PROJECT EXPERIENCE

Wind, Solar and Other Renewable Energy

Two Creeks Solar Energy Project, Wisconsin (Project Manager)

Currently managing the environmental services for a large utility-scale solar plant in Wisconsin. Services include environmental field studies and historic cultural resource assessments, state CPCN permitting and additional support studies.

Polaris Wind Energy, Gratiot County, Michigan (Project Manager)

Managed the environmental permitting and support studies for Invenenergy's proposed 168-MW wind farm. Support included Gratiot County permit application, shadow and sound modeling, and decommissioning plan.

Decommissioning Plans – Solar and Wind Energy, Midwestern U.S. (Project or Task Manager)

Managed the preparation of numerous decommissioning plans for solar and wind energy projects throughout the midwestern U.S. Scope includes describing triggering mechanisms, deconstruction methods and costs, potential revenues from salvaged equipment and land reclamation activities. Reports are used to support permitting efforts at local and state levels.

Pine River Wind Energy, Isabella and Gratiot Counties, Michigan (Project Manager)

Managed the environmental permitting and support studies for Invenenergy's proposed 161-megawatt wind farm. Support included the Pine River and Coe Township permit applications, shadow and sound modeling, and decommissioning plan.

JoAnne J. Blank

Senior Scientist and Project Manager

Acoustic and Shadow Flicker Studies – Wind and Solar Energy

Extensive experience in the management, modelling and analysis of potential sound and shadow impacts at wind and solar sites in the U.S. Assisted clients in analyzing and designing proposed renewable energy sites to demonstrate compliance and obtain required regulatory permits.

Projects include:

Two Creeks Solar, Wisconsin; Polaris Wind, Michigan; Richland Wind, Iowa; Pine River Wind Energy, Michigan; Adair Wind, Iowa; Arbor Hills (Phase I and II), Iowa; Beaver Creek (Phase I and II), Iowa; Duel Harvest, South Dakota; Ivester Wind, Iowa; McLean Wind, Illinois; Cardinal Point, Illinois; Orient Wind, Iowa; Pleasant Ridge Wind Energy, Illinois; Apple Blossom Wind, Michigan; Kenowa Ridge Wind, Michigan; Radford's Run/Twin Creeks Wind, Illinois; Grand Prairie Wind, Nebraska; Summit Wind, South Dakota; Ida Grove Wind (Phase I and II), Iowa; Palo Alto Wind, Iowa; O'Brien Wind, Iowa; California Ridge Wind II, Illinois; Highland Wind, Wisconsin; Beautiful Hills Wind, Wisconsin; Tisch Mills Wind, Wisconsin; Windy Acres, Wisconsin

Confidential Wind Farm, Wisconsin (Task Manager)

Managed the preparation of a Study Review and Work Plan for a confidential wind farm proposed in Wisconsin. Assisting client with agency consultations and potential joint PSCW/WDNR CPCN application to construct the project.

Pleasant Ridge Wind Energy, Livingston County, Illinois (Project Manager)

Managed the environmental permitting and support studies for Invenergy's proposed 230-megawatt wind farm. Support included the Livingston County permit application, expert witness testimony, shadow and sound models, wetland and waterway permits, cultural studies, stormwater permit, decommissioning plan and local permitting presentations.

Apple Blossom Wind Farm, Huron County, Michigan (Task Manager)

Task manager for development of the Geronimo Wind Energy 10,000-acre, 100-megawatt Apple Blossom Wind Farm. Managed the preparation and submission of the Huron County Permit Application, sound/noise modeling, sound survey, shadow/flicker analysis, and decommissioning plan.

Bemidji Solar Assessment, Beltrami County, Minnesota

Assisted with the assessment of potential solar sites for a municipal solar installation in Bemidji, Minnesota.

Highland Wind Energy, O'Brien County, Iowa

Provided permitting and support studies for the Invenergy, LLC 40,000-acre, 500-megawatt Highland Wind Farm. Lead author on the critical issues analyses and provided support for the permit application and Phase I Environmental Site Assessment.

O'Brien Wind Energy, O'Brien County, Iowa

Assisted in the permitting and support studies for the Invenergy, LLC 50,000-acre, 250-megawatt O'Brien Wind Energy Center. Completed sound and shadow impact modeling in support of the county permit application.

California Ridge Wind Energy II, Vermillion County, Illinois (Task Manager)

Managing the permitting and support studies for the Invenergy, LLC 44-megawatt phase for the California Ridge Wind Farm. Support included the Vermillion County permit application, sound modeling, photo simulations and decommissioning plan.

JoAnne J. Blank

Senior Scientist and Project Manager

Highland Wind Farm, Saint Croix County, Wisconsin (Project Manager)

Project manager for development of the Emerging Energies, LLC 6,000-acre, 102-megawatt Highland Wind Farm. Lead-author of the PSCW CPCN permit application. Responsible for the wind farm design, environmental field studies and permitting, erosion control permitting, sound/noise modeling, shadow/flicker analysis, photo-simulation studies, road and infrastructure preliminary assessments and agency/public meeting support.

Beautiful Hills Wind Farm, Manitowoc County, Wisconsin

Project manager for development of the Emerging Energies, LLC 900-acre, 30-megawatt Beautiful Hills Wind Farm. Managed environmental studies, shadow flicker impact analyses, sound modeling studies and provided public meeting support.

Confidential Wind Farm, Midwest US (Project Manager)

Assisted the owners of a Midwest wind farm with post-construction compliance related to shadow/flicker impacts on properties. An automatic turbine curtailment system was installed to mitigate flicker on residential buildings.

Glacier Hills Wind Park*, Columbia County, Wisconsin (Project Manager)

Managed multiple projects in support of the We Energies Glacier Hills Wind Park development. The 7,500-acre, 91-turbine, 150-megawatt wind farm. Completed the preliminary site design and was responsible for the environmental field studies and permitting, sound/noise studies and support of land owner negotiations. Assisted We Energies with preparation and submittal of the CPCN application to the PSCW.

Forward Wind Energy Center*, Southeastern Wisconsin (Project Manager)

Managed multiple projects in support of the permitting, design and construction of Invenergy LLC's 86-turbine, 129-megawatt wind farm. Responsible for the successful completion of each phase including micrositeing and facility layout, Environmental Site Assessments (Phase I's), erosion control plans, wetland permitting and pre/post ALTA property surveys. When Invenergy made the decision to expand the Forward wind farm, JoAnne managed and completed the same phases for the additional development.

Blue Sky Green Field Wind Project*, Fond du lac County, Wisconsin (Project Manager)

Managed support services for the We Energies 10,000-acre, 88-turbine, 145-megawatt wind farm. Pre-construction responsibilities included facility micrositeing, site civil design, environmental assessments and permitting, land owner agreement documentation and CPCN permit application assistance, including expert witness testimony. Construction and post-construction support included environmental compliance, access road erosion assessments, TV and radio interference mitigation and expansion planning.

Windy Acres, Sheboygan County, Wisconsin (Project Manager)

Project manager for development of the Emerging Energies, LLC 30-megawatt Windy Acres Wind Farm. Managed environmental studies, shadow flicker impact analyses, sound modeling studies and provided public meeting support.

Shirley Wind Farm*, Brown County, Wisconsin (Project Manager)

Managed services for the development of the Emerging Energies, LLC 8-turbine, 20-megawatt wind farm. Natural resource assessments, geotechnical investigations Phase I Environmental Site Assessments and property surveys were completed in support of this development.

** denotes projects completed with other firms*

**Dominion Wind Power, Multiple Confidential Sites*
(Project Manager)**

Responsible for the feasibility and analysis of several proposed wind farm sites for Dominion Power across the United States. Research and analyses included assessment of resources, permit restrictions, constructability, environmental and natural resource impacts and community support. The reports and conclusions assisted Dominion in reaching a go/no-go decision on development.

Confidential Client*, Wisconsin

As the phase manager for preliminary siting of a biomass-fired power generation facility in northern Wisconsin, JoAnne was responsible for the research and analysis of data deemed critical for the successful development of a brownfield or greenfield biomass facility. Existing facilities, natural and sensitive resources, transportation, transmission, fuel source, and water resources were analyzed to provide the client with information for preliminary siting decision.

**Federal Energy Regulatory Commission (FERC)
Experience – Natural Gas**

Northern Natural Gas – Federal and State Permitting, FERC Compliance Projects (Project Manager – over 60 projects)

Project manager for more than 60 Northern Natural Gas FERC 2.55(a), 2.55(b) and automatic blanket authorization projects for facilities within the Midwestern United States. Projects have included procurement of the Federal, state and local permits necessary to provide compliance with the FERC's regulations.

Des Moines B-line Loop Project, Iowa

Assisted with preparation of documents in support of the Northern Natural Gas' looping project in Boone and Polk Counties, Iowa. Authored several resource reports and conducted final reviews of all reports to ensure compliance with the FERC filing requirements.

**Ventura North A-line Capacity Replacement Project,
Minnesota and Iowa**

Assisted with preparation of documents in support of the Northern Natural Gas' looping project in Dakota County, Minnesota and Worth County, Iowa. Authored several resource reports and conducted final reviews of all reports to ensure compliance with the FERC filing requirements.

Transmission and Utility Routing

ANR Pipeline Company, Stevens Point, Wisconsin
JoAnne served as the phase manager for preparation of resource reports in support of a FERC filing under Section 7(c) of the Natural Gas Act. JoAnne performed needed research and analysis; wrote reports and managed the overall preparation of the documents.

Xcel Energy*, Wisconsin

JoAnne assisted with the preparation of the CPCN application for the CAPX 2020 transmission line through Minnesota and Wisconsin. Her involvement included data research and acquisition, geo-spatial data management and writing of report sections.

** denotes projects completed with other firms*

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

KEITH SILLIMAN

SENIOR PROJECT MANAGER

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Keith Silliman, Stantec Consulting Services, Inc. (Stantec), 3 Columbia Circle, Albany, NY.

3 **Q: What is your position at Stantec?**

4 A: I am a Senior Project Manager at Stantec.

5 **Q: How long have you been employed by Stantec?**

6 A: I have been employed by Stantec since February 2017.

7 **Q: Please describe your educational background and professional experience.**

8 A: I have a Bachelor of Arts degree in English and Political Science from the University at Albany, a
9 Juris Doctor degree from the Syracuse University College of Law and a Master of Science in
10 Environmental Science from the New York State College of Environmental Science and Forestry. As
11 Assistant Energy Counsel for the New York State Department of Environmental Conservation
12 (NYSDEC), I developed legal and policy options on energy-related matters for NYSDEC and
13 represented the agency in complex federal and State administrative proceedings for the licensing of
14 energy facilities as well as in the drafting of New York's State Energy Plan. After leaving NYSDEC, I
15 was employed by the New York Power Authority, where my responsibilities included developing a
16 relicensing strategy for the Niagara Hydropower Project that streamlined environmental review,
17 provided for stakeholder involvement, and incorporated innovative habitat improvement
18 mechanisms. Since becoming a consultant, I have specialized in permitting linear and other energy
19 projects, including developing best management practices for major linear energy projects to avoid,
20 reduce and mitigate environmental impacts.

21 **Q: Please describe your current responsibilities with Stantec.**

22 A: As a Senior Project Manager at Stantec, I provide strategic guidance and oversight on major energy
23 projects including initial routing assessments, critical issues analyses and permitting plans and

24 overseeing preparation of the Article VII or Article 10 certificate application. In that capacity, I am
25 responsible for assessing project compliance with local zoning and other requirements. I also have
26 developed strategic plans for the relicensing of various major hydropower projects as well as the
27 licensing of a new pumped storage project.

28 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
29 **Board on Electric Generation?**

30 A: No. I have never testified before the New York State Public Service Commission or Siting Board on
31 Electric Generation. However, I have appeared before the Public Service Commission and Siting
32 Board as Counsel to the NYSDEC.

33 **Q: Have you previously served as an expert witness before any other court, agency, or other**
34 **body on the subject you plan to offer testimony on today?**

35 A: No.

36 **Q: What is the purpose and scope of your testimony in this proceeding?**

37 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

38 **Q: What portion(s) of the Application is your testimony sponsoring?**

39 A: Exhibit 31, Local Laws and Ordinances.

40 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
41 **and supervision.**

42 A: Yes.

43 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
44 **documents produced by persons other than yourself/your company? If so, please cite these**
45 **sources. [These are independent studies, etc.]**

46 A: References, if any, are provided in the Exhibit.

47 **Q: Does this conclude your testimony?**

48 A: Yes.

Since 1987, Mr. Silliman has been at the forefront of innovative permitting strategies for energy projects in New York. As energy counsel for NYSDEC, he represented the Department in a myriad of Article VII, VIII, X and FERC licensing proceedings. Mr. Silliman developed an MOU with FERC and NYPA regarding the relicensing of the St. Lawrence Hydropower Project; the MOU was the model for FERC's alternative licensing process regulations. Mr. Silliman negotiated several historic collaborative settlement agreements with Niagara Mohawk Power Corporation for the relicensing of its hydropower systems on the Salmon, Beaver, Raquette, Black and Hudson Rivers.

At NYPA, Mr. Silliman developed a relicensing strategy for the Niagara Hydropower Project that streamlined environmental review, provided for stakeholder involvement and developed innovative habitat improvement mechanisms. He negotiated settlement agreements with the Tuscarora Nation, natural resource agencies and environmental groups.

As a consultant, Mr. Silliman has developed best management practices for major linear energy projects to avoid, reduce and mitigate environmental impacts; the BMPs streamlined permitting of several transmission line projects. To resolve natural resource concerns regarding the routing of a major new gas pipeline, Mr. Silliman proposed and lead an intensive field investigation with the regulatory agencies to examine over 90 crossings of regulated streams.

Mr. Silliman earned an MS in Environmental Science from the SUNY College of Environmental Science and Forestry and a JD from the Syracuse University College of Law.

EDUCATION

Juris Doctor, Syracuse University College of Law,
Syracuse, New York, 1983

Master of Science, Environmental Science, NYS
College of Environmental Science and Forestry,
Syracuse, New York, 1983

Bachelor of Arts, English and Political Science,
University at Albany, Albany, New York, 1980

MEMBERSHIPS

CoChair, Energy Committee, Environmental Law
Section, New York State Bar Association

PROJECT EXPERIENCE

Assessment, Permitting and Compliance

NYCDEP, Stream Management Program. Stantec is providing Environmental Assessment and Professional Engineering Services to the New York City Department of Environmental Protection (DEP) in support of the Stream Management Program for

the protection of water quality in the Catskill and Delaware Districts of the New York City (NYC) Water Supply Watershed. Keith Silliman is the Project Manager and will oversee stakeholder outreach, watershed assessment, planning, design services, construction management, and other services including NYS Article 15 application reviews and associated site assessment and characterization; mapping of riparian vegetation and land cover; mapping of streambanks with high risk of erosion (erosion hazard areas); statistical analysis of stream monitoring data to relate rates of change of bed, banks and floodplain to flow regime, channel morphology, substrate and vegetation; and public outreach to organizations, localities and other stakeholders.

Avangrid, Deer River Wind Project.
Project Manager for Article 10 Process; Provided Preliminary Scoping Statement comment review; agency consultation; developed preapplication stipulations; currently managing development of the Article 10 Certificate application and supporting exhibits.

Keith Silliman

Senior Project Manager

Deepwater Wind, South Fork Project
Provide strategic guidance on New York State Article VII regulatory requirements

NYSERDA Offshore Wind Development Plan
Assisted in drafting the Workforce Development and Supply Chain Study.

National Grid*, Upstate, New York
Provided due diligence review, regulatory guidance and strategic advice on a potential major HVDC transmission project. Directed the development of the Article VII Certificate Application for a major transmission line rebuild, including routing assessment, critical issues analysis, permit and public outreach plan. Retained with a specialized consulting agreement to advise on complex regulatory issues.

Central Hudson Gas and Electric Corporation*
Directed the development of an initial routing assessment, critical issues analysis and permitting plan for a major Transmission line rebuild; developed a comprehensive strategy for the preparation of the Article VII Certificate Application and simultaneous development of the Environmental Management and Construction Plan.

Champlain Hudson Power Express, US-Canadian Border to New York City*
Developed an initial routing assessment, critical issues analysis and permit plan; Article VII Certificate Application and initial Master Environmental Management and Construction Plan for this 1000 MW submarine and underground HVDC cable project, running from the Canadian Border to New York City. Currently preparing a route realignment submittal for the regulatory agencies.

Constitution Pipeline, Williams Companies*

Participated in strategy, agency consultation, permit development, compliance and public outreach on this 120 mile FERC-regulated natural gas pipeline project proposed to transport natural gas from northern Pennsylvania to upstate New York. Developed initial routing assessment, critical issues analysis and permit plan. Primary point of contact with all New York State regulatory agencies.

Hydropower

JPower Phantom Canyon Hydropower Project*

Develop licensing strategy and schedule for new pumped storage project. Develop PAD and study plan outline; conduct initial consultation with agencies.

Brookfield Renewable Power*

Provide and direct an imbedded compliance licensing specialist consultant in support of Eastern New York Operations staff.

Power Energy Corporation*

Conduct regulatory licensing and compliance due diligence review for a significant hydropower resource acquisition in the United States by an investment firm located in Montreal, Canada.

Niagara Project Relicensing Director, New York Power Authority*

Developed, implemented and administered a strategic plan, budget and schedule for the relicensing of NYPA's 2400 MW Niagara Hydropower Project resulting in a new 50 year license with no operational changes. Principal architect of an Alternative Licensing Process involving over 100 stakeholders. Directed an interdisciplinary team of engineering, environmental, licensing, real property, procurement and community relations Staff and consultants. Facilitated settlement discussions with the Tuscarora Nation and Environmental Stakeholders. Responsible for a 9-year relicensing process budget of \$55 million and developed a 50-year compliance plan for implementing settlement obligations and new license terms and conditions with a budget of \$444 million.

* denotes projects completed with other firms

Keith Silliman

Senior Project Manager

Brookfield Renewable Power, Eastern US*

Project Manager for developing, implementing, and administering strategic plans, budgets, and schedules for the licensing of new hydropower facilities at existing dams in the Eastern United States. Managed consultant teams on regulatory issues and consulted with regulatory and natural resource agencies about environmental and local interests. Developed a comprehensive Information Management System for potential use by all Brookfield Renewable Power development groups in the United States, Canada, and Brazil.

Legal Experience

Assistant Counsel for Energy, NYS Dept. of Environmental Conservation*

Develop legal and policy options on energy-related matters. Represent the agency in federal and State complex administrative proceedings for the licensing of energy facilities including hydropower, cogeneration, gas and electric transmission, natural gas storage, steam electric, waste-to-energy and nuclear facilities. Commissioner's representative to the interagency Energy Planning Coordinating Committee, responsible for drafting the State Energy Plans.

* denotes projects completed with other firms

Keith Silliman

Senior Project Manager

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

KRYSTIAN SOKOLOWSKI, PE

SENIOR TRANSMISSION LINE ENGINEER, MOTT MACDONALD GROUP

1 **Q: Please state your name, employer, and business address.**

2 A: Krystian Sokolowski, Mott MacDonald Group (Mott MacDonald), 101 Station Drive, Suite 130,
3 Westwood, MA 02090.

4 **Q: What is your position at Mott MacDonald?**

5 A: I am a Senior Electrical Engineer.

6 **Q: How long have you been employed by Mott MacDonald?**

7 A: I have been employed by Mott MacDonald for a total of 7 years.

8 **Q: Please describe your educational background and professional experience.**

9 A: I have a Bachelor of Science in Computer Engineering from the Wentworth Institute of Technology
10 and a Master of Science in Electrical Engineering from Worcester Polytechnic Institute. I also
11 received a certificate in power systems management from Worcester Polytechnic Institute. I have 14
12 years of experience in engineering and design relating to power delivery, including the design of
13 overhead and underground transmission and collection lines and interconnections for conventional
14 and wind energy projects. My responsibilities included conducting preliminary and detailed
15 engineering and design for transmission lines, interconnections and tap structures, conducting
16 structure analysis per NESC requirements and preparing grounding and construction drawings and
17 scope documents for cost and estimation purposes. I am registered as a professional engineer in six
18 states, including New York. Please see the attached resume for details.

19 **Q: Please describe your current responsibilities with Mott MacDonald.**

20 A: As a Senior Electrical Engineer, my responsibilities include participating in the selection and
21 evaluation of structures, preparing scoping documents, EMF calculations, drawings and associated
22 bills of materials, and conducting field inspections. Additionally, I am responsible for the design and
23 engineering of collector and point of interconnection substations.

24 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
25 **Board on Electric Generation?**

26 A: No. However, I have submitted pre-filed testimony in conjunction with the Article 10 Application for
27 the Bluestone Wind Energy Facility, Case No. 16-F-0559.

28 **Q: Have you previously served as an expert witness before any other court, agency, or other**
29 **body on the subject you plan to offer testimony on today?**

30 A: No.

31 **Q: What is the purpose and scope of your testimony in this proceeding?**

32 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

33 **Q: What portion(s) of the Application is your testimony sponsoring?**

34 A: Exhibit 34, Electrical Interconnection and Exhibit 35, Electric and Magnetic Fields.

35 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
36 **and supervision.**

37 A: Yes.

38 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
39 **documents produced by persons other than yourself/your company? If so, please cite these**
40 **sources. [These are independent studies, etc.]**

41 A: No.

42 **Q: Does this conclude your testimony?**

43 A: Yes.



Krystian Sokolowski, PE

Senior Transmission Line Engineer

Personal summary

Education:

BS in Computer Engineering,
Wentworth Institute of Tech
Power Systems Management,
Worcester Polytechnic
Institute

M.S. Electrical Engineering,
Worcester Polytechnic
Institute

Registrations:

Professional Engineer
MA #49226, 2011
NH #13893, 2012
NY #93589, 2014
RI #PE0011049, 2013
ME #PE 15265, 2017
VT #PE 018.0134182, 2018

Languages:

Polish
English

Years in practice:

14

Mr. Sokolowski is a Senior Transmission Line Engineer whose primary area of expertise is in engineering and design associated with the field of Power Delivery. Proficient with the design of overhead power lines from 13.2kV through 500kV in the U.S. and Europe, he has conducted field inspections, participated in the selection and evaluation of structures and structure spotting, prepared scope documents, drawings and associated bills of materials. He prepares drawings and documents for new construction, refurbishment of existing assets, and reconductoring of power lines. Involved with the development of structure standards using 3-D technology, and the development of new software ideas to interactively generate detailed drawings and associated bills of material, complete with a fit check of parts and clearance to neighboring parts, and to improve to the quality and clarity of the drawings.

Mr. Sokolowski is experienced with the engineering and design of wind energy projects, especially in the design of the transmission interconnection and collector system (overhead and underground). He has managed and executed multiple transmission lines for National Grid in Massachusetts, Rhode Island, and New York.

Selected projects

Mount Signal 3 Solar, CA - Mortenson: Detailed design of 230/34.5KV collector substation, provided construction support, evaluated bid documents. Prepared the physical design of the electrical equipment. Performed ground grid, bus calculation, lightning, and lighting studies and prepared reports.

Stillwater 2, CA - Mortenson: Detailed design of 63/34.5KV collector substation, 63kV metering station, provided construction support, evaluated bid documents. Prepared the physical design of the electrical equipment. Performed ground grid, bus calculation, lightning, and lighting studies and prepared reports.

Kibby Wind Park, ME - TransCanada: Detailed design of 35KV collector system, provided construction support, evaluated bid documents. Collector pole structure analysis per NESC, Sag-Tension design and overhead cables as required, collector grounding, collector pole spotting, collector design and construction drawings.

Longview 500kV Transmission/Substation Design, WV - GenPower: Owners Engineer work for 500kV design. Responsible for checking all transmission associated design and drawings for the EPC contractor.

Bliss Wind Park, NY - Noble Environmental Power: Detailed design of 35KV collector system, provided construction support, evaluated bid documents. Collector pole structure analysis per NESC, Sag-Tension design and chart development for spacer cable, Cable de-rating for underground and overhead cables as required, collector grounding, collector pole spotting, collector design and construction drawings.

Clinton Wind Park, NY - Noble Environmental Power: Detailed design of 35KV collector system, provided construction support, evaluated bid documents. Collector pole structure analysis per NESC, Sag-Tension design and chart development for spacer cable, Cable de-rating for underground and overhead cables as required, collector grounding, collector pole spotting, collector design and construction drawings.

Altona Wind Park, NY - Noble Environmental Power: Detailed design of 35KV collector system, provided construction support, evaluated bid documents. Collector pole structure analysis per NESC, Sag-Tension design and chart development for spacer cable, Cable de-rating for underground and overhead cables as required, collector grounding, collector pole spotting, collector design and construction drawings.

Allegany Transmission Line, NY - Noble Environmental Power: Provided engineering and support for licensing this new 5-mile 115kV transmission line. Engineered and designed a 115 kV transmission line using PLS-CADD.

MATEP, MA - Advanced Energy: Provided engineering in support of licensing. Preliminary engineering and design for the interconnections of a power plant output to multiple 115 kV and 345 kV transmission lines using 3-D graphical representation of the entire interconnection, substation and lines for presentation to regulating agencies.

Duley & Ryan Substations, NY - Noble Environmental Power: Designed 230kV interconnecting taps for both substations. Provided engineering support during construction. Assisted with engineering and design of the substation yard.

115kV and 230kV Transmission Lines, NY: Supported the preliminary review of reconductoring of 10 115kV lines, a total of approximately 130 circuit miles, evaluated each line using ACSS, ACCR, and ACCC conductors, and analyzed approximately 31 steel lattice tower types. Additional scope included installing a new 230kV transmission line approximately 32 circuit miles, and rebuilding three 115kV transmission lines approximately 27 circuit miles. All lines require an EMF study and detailed scope of work. Tasks include managing a team of 11 employees and the duration of the project was approximately 4 months of engineering.

WP1 230kV Transmission Tap, NY - NYPA: Preparation of construction documents. Responsible for engineering the complete layout and design of the looped tap into the Ryan Switchyard. Designed tap structures in accordance with client, regional, and NESC standards. Analysis of various aspects of the transmission line using PLS CADD.

WP2 230kV Transmission Tap, NY - NYPA: Preparation of Construction Documents. Responsible for engineering the complete layout and design of the looped tap into the Duley Switchyard. Designed tap structures in accordance with client, regional, and NESC standards. Analysis for various aspects of the transmission line using PLS CADD.

O15S 69kV Transmission Line, MA: Detailed design of a 69 kV transmission line, approximately 3.5 miles, using spacer cable construction supported on steel structures. Supported permitting, an environmental study, and alternative option studies. The design included non-standard structure design, steel pole specification, and foundation design.

Cabot Tap Separation 115 kV Transmission Line, MA: Provided preliminary and detailed engineering design services to separate existing double circuit 115 kV transmission lines sharing double-circuit lattice towers onto new independent single circuit steel structures. Supported permitting, an environmental study, and alternative option studies. The design included non-standard structure design, steel pole specification, and foundation design.

Transmission Line North America Electric Reliability Corporation (NERC) Compliance Project, MA: Prepared weekly update reports, managed project schedule and budget, completed assessment of existing PLS-CADD™ models, and prepared report including solutions to resolve clearance violations. Mr. Sokolowski performed field inspections of transmission lines to confirm all sub-standard spans pre determined in the early phases in PLS-CADD™ as well as line analysis to determine the maximum conductor temperature in which the conductor can run to eliminate sub-standard vertical clearances. He prepared and reviewed material and design packages for construction, provided construction support, and prepared as-built packages and project closeouts.

Y177 115 kV Refurbishment, MA: Provided preliminary engineering and detailed design for the refurbishment of 25.8 mile 115 kV transmission line. The design included structure outline drawings, hardware assembly drawings, bills of material, and steel pole specification based on client, regional, and NESC requirements.

Q143S and R144 115 kV Refurbishment, RI: Provided preliminary engineering and detailed design for the refurbishment of two 115 kV transmission lines, each 11.5 miles in length. The design included structure outline drawings, hardware assembly drawings, bills of material, and steel pole specification based on client and NESC requirements.

L164 Reconductoring Project, MA: Prepared construction documents associated with the reductoring of a 3.5-mile transmission line. Engineered structure modifications and replacement structures in accordance with client, regional, and NESC standards using PLS-CADD™.

National Grid, Syracuse, NY: Reconductoring, relocating, and replacing existing 13.8 kV, 23kV, 34.5 kV, 69kV and 115kV lines and associated wood-pole and steel structures. Participated in the field inspection of the line, evaluated replacement structures, prepared scope document, and prepared document and drawings for construction issue. Prepared plan and profile drawings using PLS-CADD. Prepared STORMS Work Request.

National Grid, Westborough, MA: Reconductoring, relocating, and replacing existing 13.8 kV, 23kV, 34.5 kV, 69kV and 115kV lines and associated wood-pole structures. Participated in the field inspection of the line, evaluated replacement structures, prepared scope document, and prepared document and drawings for construction issue. Prepared plan and profile drawings using PLS-CADD. Prepared PeopleSOFT Work Request.

National Grid, Westborough, MA: Developed and supported interactive 3-D models and a relational database (transmission structures and parts). Transmission Structure Standards 69 through 345kV: Modelled and investigated legacy parts and new policy parts to be used in new engineering and construction standards. Participated in the development of new standard structures and concepts based on client, regional, and NESC standards. Assembled dimensioned structures, checked clearances, part compatibility, and fit. Generated bill of materials and dimensioned drawings ready for construction.

Relay Protection and Control - National Grid: Work involved 13.8kV through 230kV relay protection and control projects for substations and transmission lines. Provided preliminary engineering and prepared scope documents for cost and estimation purposes. Developed protection and control relay design brief documents along with protective relaying descriptions, relay input/output schedules, relay lists and protective one lines. Performed power system fault analyses using ASPEN one-line program and generated relay coordination curves.

Sentinel Power Plant Project, CA – Competitive Power Ventures: Detailed design of 800MW power plant. Work included specifying, reviewing and recommending electrical distribution equipment for purchase. Detail design of the ground grid. Analyzed cable de-rating and voltage drop for direct buried cable.

Fair Haven Power Plant, VT: Provided engineering in support of permitting. Preliminary engineering and design for the interconnections of a power plant output to 115 kV transmission lines. This design was presented to regulating agencies using 3-D graphical representation of the entire interconnection, substation and existing lines.

Ansonia Power Plant, CT: Provided Engineering in support of LGIA. Preliminary engineering and design for the interconnections of a power plant to the United Illuminating Company 115 kV Substation.

Ivanpah Solar Project, CA - Klondyke Construction: Detailed design of overhead and underground 33KV & 115KV transmission line. Transmission line structure analysis per NESC, Sag-Tension design, underground layout design, overhead layout design, structure grounding and construction drawings. Analyzed cable de-rating and voltage drop for direct buried cable.

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

M. JOAN GLYNN, SENIOR PRINCIPAL

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: M. Joan Glynn, Stantec Consulting Services, Inc. (Stantec), 30 Park Drive, Topsham, ME 04086.

3 **Q: What is your position at Stantec?**

4 A: I am a Senior Principal at Stantec.

5 **Q: How long have you been employed by Stantec?**

6 A: I began working for the engineering, planning and environmental science firm Greenhorne & O'Mara
7 in 1991. The firm was acquired by Stantec in 2012.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Arts in Speech Communications, English and Technical Writing, from the
10 University of Maryland and have completed additional coursework in environmental quality review. I
11 have 27 years of experience in managing all aspects of environmental compliance, including National
12 Environmental Policy Act (NEPA) review. Over the years, I have prepared environmental
13 assessments, environmental impact statements and related documents for a wide variety of projects,
14 including a military housing project, training center, and government office building, among others. I
15 also have been responsible for conducting studies assessing the socioeconomic effects of various
16 projects, including the consolidation of the U.S. Food and Drug Administration headquarters, the
17 lease-construction of new buildings for a Federal Bureau of Investigation Central Records Complex,
18 and the widening of an existing federal highway.

19 **Q: Please describe your current responsibilities with Stantec.**

20 A: As a Senior Principal at Stantec, I specialize in social impact analysis issues such as environmental
21 justice, community services, community access and economic impacts, including direct and induced
22 impacts across various employment sectors within a region. I use appropriate models to assess the
23 effects of project spending on regional employment and economic conditions.

24 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
25 **Board on Electric Generation?**

26 A: No.

27 **Q: Have you previously served as an expert witness before any other court, agency, or other**
28 **body on the subject you plan to offer testimony on today?**

29 A: No.

30 **Q: What is the purpose and scope of your testimony in this proceeding?**

31 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

32 **Q: What portion(s) of the Application is your testimony sponsoring?**

33 A: Exhibit 27, Socioeconomic Effects, and Exhibit 28, Environmental Justice.

34 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
35 **and supervision.**

36 A: Yes.

37 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
38 **documents produced by persons other than yourself/your company? If so, please cite these**
39 **sources. [These are independent studies, etc.]**

40 A: References, if any, are provided in the Exhibits identified above.

41 **Q: Does this conclude your testimony?**

42 A: Yes.

Ms. Glynn has extensive experience in managing all facets of environmental compliance including natural resource studies and permitting, cultural resource studies, hazardous waste/hazardous materials assessments, and socioeconomic impact assessments. She has managed and contributed to numerous National Environmental Policy Act (NEPA) compliance documents including Environmental Impact Statements (EISs) and Environmental Assessments (EAs) for federal and state clients. She coordinates all aspects of NEPA compliance including alternatives development, existing conditions documentation, impact analysis, and agency/public coordination. Ms. Glynn specializes in social impact analysis issues such as environmental justice, community services, community access, relocations, and economic impacts. Ms. Glynn, as a Senior Principal, plays an integral role in identifying policy issues and conducting quality control reviews of NEPA documentation.

EDUCATION

BA, Speech Communications, English/Technical Writing, University of Maryland, College Park, Maryland, 1991

Training, Streamlined Environmental and Regulatory Process, Maryland State Highway Administration, 2002

Coursework, National Environmental Policy Act, ABA, 1994

Coursework, NEPA Policy, Procedure, and Science/Art, U.S. Department of Agriculture, Graduate School, 1992

Environmental Planning and Historic Preservation Compliance Services, U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA)

Joan is responsible for review of grant applications for HRSA under American Recovery and Reinvestment Act (ARRA), many completed on a fast track schedule. She oversees assessment of economic impacts for proposed grants in compliance with the National Environmental Policy Act. She has developed and delivered training to HRSA project officers and senior level managers on environmental compliance and helped author programmatic environmental assessments for grant reviews.

PROJECT EXPERIENCE

M. Joan Glynn

Senior Principal · 27 Years of Experience

Department of Homeland Security Master Plan, Saint Elizabeths, Washington, DC

Project Manager in support of Master Planning efforts for redevelopment of the 176-acre St. Elizabeths West Campus and 12 acres of the St. Elizabeths East Campus. Developed EIS and socioeconomic analyses for this high profile, controversial project, including developing a Master Plan for construction of the USCG Headquarters and facilities to house other components of the Department of Homeland Security Headquarters on a 176-acre former mental hospital property. Analysis included impact to the regional economics utilizing the Federal Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II), a regional economic model, to assess the potential economic impacts of the proposed project. The model produces multipliers that are used in economic impact studies to estimate the total impact of a project on a region.

Armed Forces Retirement Home (AFRH) Master Plan, General Services Administration, Washington, DC

Joan prepared an Environmental Impact Statement for the implementation of a Site Development Master Plan to allow the AFRH to enter into long-term land leases with private developers to generate income to supplement the Home's Trust Fund. Tasks included socioeconomic impact assessment of the development of residential, commercial, health care and institutional uses on previously undeveloped land. Assessed the cumulative impact of development when added to other planned economic development in the region.

Consolidation of U.S. Food and Drug Administration (FDA) Headquarters EIS, General Services Administration (GSA), Montgomery County, White Oak, Maryland

Joan was the Lead Environmental Scientist and NEPA Specialist for the proposed construction of a consolidated facility for the FDA. The consolidation consisted of approximately 2.6 MSF of office and laboratory space for 14,000 employees on 130 acres at the Naval Surface Warfare Center, which was identified for closure through the Base Relocation and Closure process. She led preparation of the Environmental Impact Statement for this high-profile, controversial project. Joan was responsible for socioeconomic analyses of the redevelopment and utilized the Federal Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II) to assess the potential economic impacts of the proposed project. The model produces multipliers that are used in economic impact studies to estimate the total impact of a project on a region.

FDA Center for Food Safety and Applied Nutrition Offices and Laboratory EA, General Services Administration, Prince George's County, Maryland

Joan managed the preparation of an Environmental Assessment for the relocation of two FDA Centers to new facilities near the University of Maryland/College Park Metro Station. She studied impacts to local communities including impacts to taxes, economy and employment, and community services.

M. Joan Glynn

Senior Principal · 27 Years of Experience

EIS for the FBI Central Records Complex, General Services Administration, Region 3, Frederick County, Maryland

Joan provided quality control and project management for an EIS for the lease-construction of three buildings totaling 947,000 rentable SF for a new Central Records Complex for the Federal Bureau of Investigation. The project included the relocation of approximately 300 employees from the DC metropolitan area to Winchester, Virginia. Joan studied the socioeconomic impacts of the relocation including impacts to taxes, economy and employment, and community services.

Preliminary Site Analysis and EIS, Bureau of Alcohol, Tobacco, and Firearms Headquarters, General Services Administration, Washington, DC
Joan managed environmental and cultural studies for a new 300,000-SF office building. Conducted a Phase I and Phase II Environmental Site Assessment and Phase I archaeological survey. The EIS addressed economic effects of constructing a government facility within the D.C. Central Employment Area, effects on traffic associated with the transfer of over 1,000 employees and impacts to on-site and adjacent cultural resources.

National Education and Training Center EA, U.S. Fish & Wildlife Service, Harpers Ferry, West Virginia

Joan prepared an EA for the development of a training center. She assessed potential impacts from development of the site to the infrastructure and economics of the surrounding community.

Engineering and Environmental Services, Maryland State Highway Administration, Statewide, Maryland

Joan provided support for the I-81 corridor study in Washington County, conducting extensive socioeconomic studies for various alternatives for widening the existing roadway and improving/consolidating nine interchanges on the 12-mile corridor. Analyses included economic impacts of implementing tolls on the roadway.

Lorton Correctional Facility Environmental Assessment, General Services Administration, Office of Property Disposal, Fairfax County, Virginia

Joan was a Project Manager for a contract to prepare the necessary NEPA environmental documentation, including socioeconomic impacts of the proposed disposal of the Lorton Correctional Complex by the General Services Administration. Under the EA, she analyzed impacts associated with the "No Action Alternative," under which the Federal government would retain ownership of the property, and the disposal alternative under which approximately 2,700 acres would be conveyed to a variety of public entities for development of housing, community facilities, and commercial facilities.

EA and FONSI, Ocracoke Family Housing, U.S. Coast Guard, Ocracoke Island, North Carolina

Joan prepared an EA and a Finding of No Significant Impact (FONSI) for the proposed construction of new multi-family housing units. She addressed socioeconomic effects on a small fishing village, the environment, and the surrounding historic district.

M. Joan Glynn

Senior Principal · 27 Years of Experience

Warren Street Extension and Relocation/Reconstruction of US 222 EIS, Pennsylvania Department of Transportation, District 5-0, Berks County, Pennsylvania (EIS Public Involvement Coordinator)

Joan was responsible for preparing newsletters and questionnaires, and coordination of public information workshops and agency coordination meetings. She conducted socioeconomic studies to determine impacts to the economy of the local communities, community services, and community cohesion. Issues of concern to the public included impacts on local parks, effects on emergency response times, and the relocation of more than 30 businesses and 60 residences. Prepared a Section 4(f) evaluation for two historic properties.

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF
MICHAEL A. CINQUINO, Ph.D., RPA
SENIOR VICE PRESIDENT AND BUFFALO BRANCH OFFICE DIRECTOR
PANAMERICAN CONSULTANTS, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Michael A. Cinquino, Ph.D., RPA, Panamerican Consultants, Inc. (Panamerican), 2390 Clinton
3 Street, Buffalo, New York 14227.

4 **Q: What is your position at Panamerican?**

5 A: I am Senior Vice President of Panamerican and Director of the Buffalo Branch Office.

6 **Q: How long have you been employed by Panamerican?**

7 A: I have been employed by Panamerican since 1993.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Arts degree in sociology from St. John Fisher College and a Master of Arts
10 degree and doctorate in anthropology from the State University of New York at Stony Brook. I am a
11 Registered Professional Archaeologist (RPA) and affiliated with various professional organizations,
12 including the New York Archaeological Council. I have more than 40 years of experience in cultural
13 resource management, including field methods and design, analytical and historic research, and
14 cultural resource expertise relating to both historic and prehistoric resources. Over the course of my
15 career, I have served as Principal Investigator and/or Project Director on more than 750 cultural
16 resources investigations in both the United States and the Caribbean. In addition to my work as a
17 private consultant, I was employed for two years as a cultural resource reviewer for the New York
18 State Department of Environmental Conservation in Albany, New York, and for three years as State
19 Archaeologist and Review and Compliance Archaeologist for the Puerto Rico State Historic
20 Preservation Office. My curriculum vitae is attached.

21 **Q: Please describe your current responsibilities with Panamerican.**

22 A: Since 2005, I have served as Panamerican's Project Director for all cultural resources and historic
23 building surveys conducted by the company for wind energy projects in New York State. This
24 includes more than 25 projects in 13 counties in New York that have generated more than 50

archaeological and historic structures investigations and reports addressing archaeological and historic structure resources. In conjunction with these projects, I also have been responsible for consulting with New York State agencies and local governments regarding mitigation of adverse effects to cultural properties and preparation of formal mitigation plans. More generally, I have served as Project Director and/or Principal Investigator on a host of energy and other projects, including transmission line installation/replacements, natural gas pipeline installation/replacements, waterline replacements, and solar projects, among many others. As director of Panamerican's Buffalo Office, I oversee all operations and projects conducted by the Panamerican Buffalo-based staff.

Q: Have you previously testified before the New York State Public Service Commission or Siting Board on Electric Generation?

A: Yes. I have previously testified before the New York New York Public Service Commission or Siting Board on Electric Generation in conjunction with the following projects:

- Village of Arcade and Noble Allegany Windpark, LLC Certificate of Environmental Compatibility and Public Need for the Construction and Operation of the Centerville to Yorkshire 115 kV Transmission Project Pursuant to Article VII of the Public Service Law (Case No. 08-T-0746): Responsible for the architectural and archeological reports prepared for the application including cultural resource investigations relevant to the referral to the New York State Office of Parks, Recreation and Historic Preservation. Addressed adverse effect on historic and cultural resources along the right-of-way.
- St. Lawrence Gas Company, Inc., Construction, Operation and Maintenance of a New 8, 6 and 4-inch Steel, High Pressure Natural Gas Transmission Line and Related Land and Equipment from Town of Norfolk in St. Lawrence County and the Village of Chateaugay in Franklin County (Case No. 10-T-0154): Served as Project Director for cultural resources investigations including

Phase 1A and Phase 1B historic structure and archaeological investigations and Phase 2 archaeological investigation. Responsible for those sections of the application relevant to the referral to the New York State Office of Parks, Recreation and Historic Preservation.

- Upstate NY Power Corp. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of The Public Service Law For The Upstate Power Transmission Project (Case No. 09-T-0049): Served as Project Director for cultural resources investigations including the preliminary (Phase 1A) cultural resources (including architectural and archeological reports) analysis of the proposed transmission line route prepared for the application. Responsible for those sections of the application addressing the referral to the New York State Office of Parks, Recreation and Historic Preservation.
- Stony Creek Wind Farm, Town of Orangeville, Wyoming County, New York (name changed to Orangeville Wind Farm) (Case No. 11-E-0351): Assisted in written testimony and preparing summary discussions and results of SHPO consultation and cultural resource investigations, including Phase 1A Historic Structure and Archaeological Investigations, five-mile historic structure inventory survey, Phase 1B archaeology field study investigation, and archaeological field testing plan. Assisted in DEIS/FEIS cultural resource section preparation. Responsible for those sections of the application relevant to the referral to the New York State Office of Parks, Recreation and Historic Preservation.

Q: Have you previously served as an expert witness before any other court, agency, or other body on the subject you plan to offer testimony on today?

A: No.

Q: What is the purpose and scope of your testimony in this proceeding?

A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

Q: What portion(s) of the Application is your testimony sponsoring?

72 A: Exhibit 20, Cultural Resources.

73 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
74 **and supervision.**

75 A: Yes.

76 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
77 **documents produced by persons other than yourself/your company? If so, please cite these**
78 **sources.**

79 A: References, if any, are provided in the Exhibit and related reports.

80 **Q: Does this conclude your testimony?**

81 A: Yes.



MICHAEL A. CINQUINO, Ph.D., RPA

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Panamerican Consultants, Inc.
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Buffalo, New York 14227
716.821.1650 (phone)
716.821.1607 (fax)
mcinquino@panamconsultants.com
www.panamconsultants.com (web site)

EXPERIENCE PROFILE

Dr. Michael A. Cinquino, RPA, currently serves as Senior Vice President of Panamerican Consultants, Inc. and director of the Buffalo Branch Office. Dr. Cinquino holds a Ph.D. and M.A. in anthropology and has more than 40 years of experience in cultural resource management including field methods and design, analytical and historic research, cultural resource auditing, and report writing as an archaeologist (both historic and prehistoric) and Principal Investigator in the eastern United States and Caribbean. He has served as Principal Investigator and/or Project Director on more than 750 cultural resources investigations in New York, New Jersey, Pennsylvania, West Virginia, Maryland, Massachusetts, Florida, Ohio, Louisiana, Mississippi, Texas, and the Caribbean. These include numerous ecosystem restoration, historic structures surveys, wetlands restoration, and energy-related projects, such as electric transmission lines, natural gas and oil pipelines, and wind-energy developments, as well as projects for U.S. Army Corps of Engineers (USACE), the U.S. Department of Defense, and private industry. Dr. Cinquino has prepared numerous technical reports, environmental assessments, cultural resource management plans, MOAs, and prehistoric National Register forms and evaluations. He has three years regulatory experience as State Archaeologist & Review & Compliance Archaeologist for the Puerto Rico State Historic Preservation Office. His duties also included serving as PRSHPO representative to the Interagency Meeting for permit review held by the Corps of Engineers with U.S. EPA and U.S. Fish and Wildlife Service to assess permit applications and potential environmental effects. In addition, Dr. Cinquino conducted seminars for government agencies and municipality officials concerning archeological investigations, federal laws and regulation, and the federal compliance process.

He worked two years with the New York State Department of Environmental Conservation as serving as cultural resource reviewer for the statewide Uniform Procedure Act's permit program for compliance with the state cultural resource laws and regulations.

In addition, he has prepared numerous cultural resource sections for environmental assessments, impact statements, and FERC and Article VII cultural resource permitting documents. He has worked for various clients including Stantec, Avangrid, Invenergy, Noble, National Grid/Niagara Mohawk, Empire State Pipeline Company, National Fuel, Williams Gas Pipeline, Haley & Aldrich, Northern Ecological Associates, Ecology & Environment, URS, Environmental Design & Research, USACE, EPA, New York State Department of Transportation (NYSDOT), National Park Service, U.S. Army, Navy and Air Force, and numerous municipalities and private sector organizations. He has also extensive experience conducting cultural resource investigations, archaeological and historic structure evaluations for wind-energy projects, serving as principal investigator and/or project director on more than 25 wind energy project throughout New York State (see below).

Historic Structures Surveys for Wind-Energy Projects in the New York State. Since 2005, Dr. Cinquino has served as Panamerican's Project Director for all cultural resources and historic building surveys

conducted by Panamerican for wind-energy projects in New York State. This includes more than 25 wind-energy projects including transmission lines that have generated more than 50 archaeological and historic structures investigations and reports. The archaeological investigations focus on impacts at turbine locations and at map-documented structure sites, while the architectural history surveys involve assessing and evaluating all historic structures within five miles of a proposed turbine. These wind-energy projects have been located throughout New York State including projects in Lewis, Jefferson, Steuben, Allegany, Cattaraugus, Chautauqua, Clinton, Cortland, Delaware, Franklin, Herkimer, Madison, and Wyoming counties. Dr. Cinquino also consults with New York State agencies and local officials regarding mitigation of adverse effects to cultural properties and preparation of MOAs and mitigation plans.

He has conducted archaeological projects in Caribbean since 1982 including serving as project director or principal investigator on more than 30 projects in the Caribbean including 20 in Puerto Rico, and 10 in the Virgin Islands.

EDUCATION

Ph.D. Anthropology, SUNY at Stony Brook (1986)
M.A. Anthropology, SUNY at Stony Brook (1977)
B.A. Sociology, St. John Fisher College (1971)

PROFESSIONAL CERTIFICATION

1993-present Registered Professional Archaeologist

Additional Training

Section 106 of the NHPA (SRI Foundation)
USEPA Hazardous Waste Site Investigation Training Course
EPA Hazardous Waste Site Investigation Refresher Courses

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologist (RPA)
New York Archaeological Council (NYAC)
Society for American Archaeology
Society for Historical Archaeology
Council for Northeast Historical Archaeology
Society for Latin American Anthropology
International Association for Caribbean Archaeology

REPRESENTATIVE NATURAL GAS PIPELINE, TRANSMISSION LINE, AND ARTICLE VII AND X EXPERIENCE

(serving as Project Director and/or Principal Investigator)

2018 Phase 1 Cultural Resources Investigation for the Columbarium VA / National Cemetery Administration, St. Albans, Queens County, New York. OPRHP #17PR01450. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for QPK Design, Syracuse, NY under contract to U.S. Army Corps of Engineers, New York District, NY and National Cemetery Administration, U.S. Department of Veterans Affairs.

2018 Phase 2 Cultural Resources Investigation of Site PCI/Hinsdale School-1 (00914.000028) at Hinsdale High School, Town of Hinsdale, Cattaraugus County, New York. OPRHP #17PR00556. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Hinsdale Central School District, Hinsdale, NY.

- 2018 Construction Monitoring Report for Waterline Replacement, Naval Operations Support Center (NOSC) Buffalo, 3 Porter Avenue, City of Buffalo, Erie County, New York. OPRHP #16PR05977. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Wu & Associates, Inc., Mount Laurel, NJ.
- 2018 Phase 1 Archaeological Cultural Resources Investigation for the Proposed Harris Hill Radio Tower, Town of Big Flats, Chemung County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Chemung County Emergency Management, Elmira, NY.
- 2017 Phase 1B Cultural Resources Investigation for the Proposed Number Three Wind Farm, Towns of Harrisburg and Lowville, Lewis County, New York. NYSHPO ##16PR06216. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Invenergy Wind LLC, Chicago.
- 2017 Phase 1A Cultural Resources Investigation for the Proposed Canisteo Wind Energy Center, Towns of Cameron, Canisteo, Greenwood, Jasper, Troupsburg, and West Union, Steuben County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Invenergy Wind LLC, Chicago.
- 2017 Phase 1A Cultural Resources Investigation for the Alle-Catt Wind Farm, Towns of Centerville and Rushford, Allegany County, Towns of Farmersville, Freedom, and Yorkshire, Cattaraugus County, and Town of Arcade, Wyoming County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Invenergy Wind LLC, Chicago.
- 2017 Phase 1 Cultural Resources Investigation for the Proposed Java Energy Solar Project, Town of Java, Wyoming County, New York. OPRHP #17PR07247. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Invenergy Solar Development LLC, Chicago.
- 2017 *Phase 1 Cultural Resources Investigation for the Proposed National Fuel RM32 Natural Gas Pipeline Replacement Project (2017) within the Cattaraugus Indian Reservation, and Town of Hanover, Chautauqua County, New York.* OPRHP #16PR08786. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Fuel Gas Supply Corporation, Erie, PA.
- 2016 Phase 1A Cultural Resources Investigation for the Proposed Number Three Wind Farm, Towns of Harrisburg, Lowville, and Denmark, Lewis County, New York. New York State Historic Preservation Office #16PR06216. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Invenergy Wind LLC, Chicago.
- 2016 *Phase 1B Cultural Resources Investigation of National Grid's Proposed Lock 8 Mohawk River Crossing, Towns of Glenville and Rotterdam, Schenectady County, New York.* OPRHP #14PR02362. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Stantec, Rochester, NY.
- 2015 *Phase I Cultural Resources Investigation for National Fuel's Line R34S Transmission Pipeline Replacement Project, Town of Hanover, Chautauqua County and Town of Perrysburg, Cattaraugus County, New York.* OPRHP #15PR07352. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Fuel Gas Supply Corporation, Erie, PA.
- 2014 *Phase 1A Cultural Resources Investigation of National Grid's Proposed Lock 8 Mohawk River Crossing, Towns of Glenville and Rotterdam, Schenectady County, New York.* Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Stantec, Rochester, NY
- 2014 *Phase I Cultural Resources Investigation for the Empire Pipeline, Inc., Tuscarora Lateral Project, Towns of Tuscarora, Lindley, and Caton, Steuben County, New York.* OPRHP #13PR01612. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Haley & Aldrich, Rochester, NY.
- 2013 *Phase I Cultural Resources Investigation for the Proposed National Fuel Natural Gas Pipeline Replacement Project within the Cattaraugus Indian Reservation and Towns of Collins and Brant,*

Erie County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Fuel Gas Supply Corporation, Erie, PA.

2012 *Phase IA Cultural Resources Investigation for National Grid's Proposed St. Johnsville #54 New York State Route 5 Rear Lot Pole Relocation, Town of St. Johnsville, Montgomery County, New York. OPRHP No. 12PR03709. Prepared for: Stantec, Rochester, NY.*

2011 *Phase II Cultural Resources Investigation for Site PCI/St. Lawrence Gas-1, St. Lawrence Pipeline Project, St. Lawrence County, New York. OPRHP #10PR03717. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for EDR, Syracuse.*

2010 *Phase IB Cultural Resources Investigation for the Proposed St. Lawrence Pipeline Project, St. Lawrence and Franklin Counties, New York. 2 vols. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for EDR, Syracuse, NY.*

2009 *Phase I Cultural Resources Investigation for the Proposed RG&E Line 937, Town of Ontario, Wayne County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for URS Corp., Buffalo.*

2008 *Addendum to the Phase I Cultural Resources Investigation for the Proposed Centerville to Yorkshire 115kv Transmission Line (Section 3), Town of Freedom, Cattaraugus County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Noble Allegany Windpark, LLC, Essex, CT, and Village of Arcade, Arcade, NY.*

2008 *Phase I Cultural Resources Investigation for the Proposed Noble Centerville to Yorkshire 115kv Transmission Line (Section 3), Town of Arcade, Wyoming County, and the Towns of Freedom and Yorkshire, Cattaraugus County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Noble Allegany Windpark, LLC., Essex, CT.*

2008 *Architectural Survey (Three-mile APE) for the Proposed Noble Centerville to Yorkshire 115kv Transmission Line, Town of Arcade, Wyoming County, and the Towns of Freedom and Yorkshire, Cattaraugus County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Noble Allegany Windpark, LLC, Essex, CT.*

2007 *Addendum 4 to the Phase I Cultural Resources Survey for the Proposed Empire Connector Project Ontario, Yates, Schuyler, Chemung, and Steuben Counties, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Haley & Aldrich of New York, Inc., Rochester, NY and Empire State Pipeline, Williamsville, NY.*

2007 *Phase I Cultural Resources Investigation for the Proposed Trenton-Middleville Pole Replacement Project, Town of Russia, Herkimer County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse, NY.*

2006 *Phase IB Addendum for the Proposed Electric Transmission Line Relocation, Town of Massena, St. Lawrence County, New York. 06PR04861. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse, NY.*

2006 *Phase I Cultural Resources Investigation for the Proposed Electric Transmission Line Relocation, Town of Massena, St. Lawrence County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse, NY.*

2006 *Phase I Cultural Resources Investigation for the Proposed Electric Transmission Line Relocation, Town of Piercefield, St. Lawrence County, New York. OPRHP #06PR00599. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse.*

2005 *Phase I Cultural Resources Investigation for the Proposed Hamilton College Project in the Town of Kirkland, Oneida County, New York. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse.*

- 2005 *Phase I Cultural Resources Investigation for the Proposed Sodeman Road Substation Project, Town of Milton, Saratoga County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Grid, Syracuse.
- 2005 *Phase I Cultural Resources Investigation for the Proposed Renaissance Drive Substation # 229, Town of Amherst, Erie County, New York (OPRHP 05PR03353)*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Niagara Mohawk Power Corporation, Syracuse, NY.
- 2005 *Phase I Cultural Resources Investigation for the Proposed Electric Transmission Project, City of Albany, Albany County, and City of Rensselaer, Rensselaer County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Niagara Mohawk, Syracuse, NY.
- 2004 *Phase I Cultural Resources Investigation for the Proposed Natural Gas Line T Relocation and Replacement, McKinley Parkway, Town of Hamburg, Erie County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for National Fuel Gas Supply Corporation, Erie, PA.
- 2001 *Phase I Cultural Resources Investigation for the Proposed Sweet Home Road Substation, Town of Amherst, Erie County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Niagara Mohawk Power Corporation, Syracuse.
- 2000 *Phase I Cultural Resources Investigation for the Proposed Niagara Mohawk Power Corporation Placement of Approximately 1,200 Linear Feet of Gas Line Along Duanesburg Road and Princetown Plaza in the Towns of Princetown and Rotterdam, Schenectady County, New York*. Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Niagara Mohawk Power Corporation, Syracuse, NY.
- 1999 *Archaeological Investigation [for the] Relocation of Transmission Line Poles New Scotland-Reynolds Road 115kv Papscanee Island Between Route 9J and Riverside Avenue Extension, Town of East Greenbush, Rensselaer County, New York (OPRHP No. 99PR0679)*. Edward V. Curtin Consulting Archaeologist, Saratoga Springs, NY and Panamerican Consultants, Inc., Buffalo Branch, Buffalo. Prepared for Niagara Mohawk Power Corporation, Syracuse, NY.

SELECTED PUBLICATIONS

Hayward, Michele H. and Michael A. Cinquino

2016 *Caribbean Rock Art 2010 - 2014: Documentation, Dating and Definitions in Rock Art Studies: News of the World V*, edited by Paul Bahn, Natalie Franklin, Matthias Strecker and Ekaterina Devlet (ISBN 9781784913533). David Brown Book Company, Oakville, CT.

Hayward, Michele H., and Michael A. Cinquino

2012 *Rock Art and Transformed Landscapes in Puerto Rico*. In *A Companion to Rock Art*, edited by Jo McDonald and Peter Veth, pp. 103-124. Blackwell Publishing Ltd,

Hayward, Michele H., Michael A. Cinquino, and Frank J. Schieppati

2010 *Rock Art and Ancestors in Pre-Columbian Caribbean Cultures. Proceedings of the Congress of the International Association for Caribbean Archaeology* 22:594-609.

Hayward, Michele H., Lesley-Gail Atkinson, and Michael A. Cinquino (Editors)

2009 *Rock Art of The Caribbean*. University of Alabama Press, Tuscaloosa.

Hayward, M.H., L.G. Atkinson, and M. A. Cinquino

2009 Introduction. In *Rock Art of the Caribbean*, M.H. Hayward , L.G. Atkinson , and M.A. Cinquino, eds, pp. 1 – 12. University of Alabama Press, Tusaloosa.

Hayward, M. H., P. G. Roe, Michael A. Cinquino, P. A. Alvarado Zayas, and K. S. Wild

Michael A. Cinquino, Ph.D, RPA, Panamerican Consultants, Inc.

2009 Rock Art of Puerto Rico and the Virgin Islands. In *Rock Art of The Caribbean*, Michele Hayward, Lesley-Gail Atkinson, and Michael A. Cinquino, Editors, pp. 115-136. The University of Alabama Press, Tuscaloosa.

Hayward, Michele H., Frank J. Schieppati, and Michael A. Cinquino

2005 Theorizing Past Religions and Puerto Rican Rock Art. *Proceedings of the 21st Congress of the International Association for Caribbean Archaeology*, Trinidad.

Cinquino, Michael A., Michele H. Hayward, and Frank J. Schieppati

2003 Puerto Rican Rock Art Types: Their Distribution and Significance. *Proceedings of the Congress of the International Association for Caribbean, Santo Domingo, Archaeology* 20(2):667-674.

Hayward, Michele H., and Michael A. Cinquino

2002 *Archaeological Investigations at the Aklis Site. Sandy Point National Wildlife Refuge, St. Croix, U.S. Virgin Islands*. SEAC Technical Reports No. 10. Southeast Archaeological Center, Tallahassee, Florida.

Hayward, M., M. Cinquino, Yvonne M., Narganes, L. Newsom, F. Schieppati, & C. Stanley

2002 *Archaeological Investigations at the Aklis Prehistoric site, Sandy Point National Wildlife Refuge, St. Croix, US Virgin Islands*. National Park Service, SEAC Technical Report No. 10.

Cinquino, M.A., C. Tronolone, and C. Vandrei

1999 Historic Resources on the Vieques Naval Reservation and Historical Development of Vieques Island, Puerto Rico. *Proceedings of the International Congress for Caribbean Archaeology* 17:376-385. Nassau, Bahamas, 1997.

Cinquino, Michael A., Michele H. Hayward, and Inez Reed Hoffman

1995 1994 Excavations at the Aklis Site, Sandy Point National Wildlife Refuge, St. Croix, U.S. Virgin Islands. *Proceedings of the Congress of the International Association for Caribbean Archaeology* 16:67-82. Basse Terre, Guadeloupe.

Cinquino, M.A., M. Keller, C. Tronolone, and C Vandrei

1986 Log Roads to Light Rails: The Evolution of Main Street and Transportation in Buffalo, New York. *Northeast Historical Archaeology* 14:53-64.

SELECTED PRESENTATIONS AT PROFESSIONAL MEETINGS

2017 Cagüitas Archaeological site within the proposed Aguas Buenas – Caguas Sanitary Line Project, Caguas, Puerto Rico. 27th Congress of the International Association of Caribbean Archaeology, St. Croix, US Virgin Islands

2000 *The New York District, United States Army Corps of Engineers and Panamerican Consultants, Inc.: Cooperative Efforts in Cultural Resource Management* (with Dr. M.H. Hayward). Paper presented at the 65th Annual Meeting of the Society for American Archaeology, Philadelphia,

1998 1994 Excavations at the Aklis Site, Sandy Point National Wildlife Refuge, St. Croix U.S. Virgin Islands (with Michele Hayward). *Proceedings of the Sixteenth International Congress for Caribbean Archaeology*.

1995 *A Discussion of Subsistence Remains Recovered from the Intensive Archaeological Investigations conducted at the Historic Spanish Military Fort of San Felipe del El Morro, San Juan, Puerto Rico* (with Dr. M.H. Hayward). Submitted at the Society for Historical Archaeology meetings in Washington, D.C., January 1995.

2006 How to make a living from sugar, molasses and rum on Puerto Rico in the 1800s and early 1900s; Innovative methods to economically examine large project areas with low density artifacts

but high density expectations (with L. Pumarada, M.H. Hayward, and F.J. Schieppati). Presented at 71st Society for American Archaeology, Caribbean Compliance Archaeology Session.

- 1994 *Results of Panamerican Consultants Intensive Archaeological Investigations at Historic Spanish Military Fort of San Felipe del El Morro, San Juan, Puerto Rico* (with Dr. M. H. Hayward). Submitted at the Society of American Archaeology meetings in Anaheim, California, April 1994.
- 1992 *An Evaluation of 500 Reconnaissance Surveys Conducted on the Islands of Puerto Rico, Vieques, Culebra, and Mona: Assessing Field Methods and Effectiveness of the Federal Cultural Resource Program*. Presented at the 57th Annual Meeting of the Society for American Archaeology, Pittsburgh, Pennsylvania.

PROFESSIONAL INTERESTS

Precontact and historic archaeology in the northern and eastern United States, predictive modeling, cultural resource management, archaeological survey and testing methodology, Caribbean Rock Art, precontact and historic archaeology, and historic preservation.

PROFESSIONAL SERVICE

New York Archaeological Council
Board Member, 1995-1997, 1999-present

EMPLOYMENT HISTORY

- 1993-Present Panamerican Consultants, Inc. (Buffalo, New York)
- 1992-1993 EBASCO Environmental (Lyndonville, New Jersey)
- 1989-1992 Puerto Rico State Archaeologist and PRSHPO Project Reviewer
Puerto Rico State Historic Preservation Office (San Juan, Puerto Rico)
- 1986-1988 Archaeological Consultant: Reviewer of Statewide Permitting Program
New York State Department of Environmental Conservation (Albany, New York)
- 1980-1986 Senior Archaeologist, Ecology and Environment, Inc. (Buffalo, New York)
- 1980 Lecturer: Ethnographies of Mexico; Department of Anthropology
State University of New York at Stony Brook
- 1977-1979 Conducted doctoral research in Western Mexico
- 1974-1977 Graduate Research Assistant, Department of Anthropology, SUNY of NY at Stony Brook

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

ROBERT D. O'NEAL, CCM, INCE BOARD CERTIFIED
MANAGING PRINCIPAL, EPSILON ASSOCIATES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Robert D. O'Neal, Epsilon Associates, Inc. (Epsilon), 3 Mill & Main Place, Suite 250, Maynard, MA
3 01754.

4 **Q: What is your position at Epsilon?**

5 A: I am a Managing Principal at Epsilon.

6 **Q: How long have you been employed by Epsilon?**

7 A: I have been employed by Epsilon for 18 years.

8 **Q: Please describe your educational background and professional experience.**

9 A: I have a Bachelor of Arts in Engineering Science from Dartmouth College and a Master of Science
10 in Atmospheric Science from Colorado State University. I am a Certified Consulting Meteorologist
11 (CCM) and am Board Certified through the Institute of Noise Control Engineering (INCE) and served
12 on INCE's Board of Directors from 2014–2016. I am also a member of the Acoustical Society of
13 America. I have over 30 years of experience in the areas of community noise impact assessments,
14 meteorological data and analyses, and air quality modeling. My noise impact evaluation experience
15 includes design and implementation of sound level measurement programs, modeling of future
16 impacts, conceptual mitigation analyses and compliance testing. I have been involved in assessing
17 noise from wind projects since 2004 and have authored several articles on wind turbine noise and
18 given numerous conference presentations on the subject. Please see the attached resume for
19 details.

20 **Q: Please describe your current responsibilities with Epsilon Associates, Inc.**

21 A: As one of the Managing Principals of Epsilon Associates, I share in responsibility for overall direction
22 and operation of the company. Prior to this position, I was a Principal and the leader of the Acoustics
23 Group, where I managed staff and assigned resources on our noise-related projects. In addition, I

24 perform technical studies myself on wind energy projects ranging from sound level measurements,
25 sound modeling, noise control design, and expert testimony.

26 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
27 **Board on Electric Generation?**

28 A: Yes. I testified in 2003 on behalf of the Besicorp-Empire Development Company, LLC's 505 MW
29 combined cycle cogeneration plant, Rensselaer, NY [Case No. 00-F-2057]. In addition, I submitted
30 pre-filed testimony in conjunction with the Eightpoint Wind Energy Facility [Case No. 16-F-0062], the
31 Galloo Island Wind Energy Facility [Case No. 15-F-0327], and Bluestone Wind Energy Facility [Case
32 No. 16-F-0559].

33 **Q: Have you previously served as an expert witness before any other court, agency, or other**
34 **body on the subject you plan to offer testimony on today?**

35 A: Yes. I have testified on noise issues before numerous agencies, including the Maine Board of
36 Environmental Protection, the Massachusetts Energy Facilities Siting Board, the Environmental
37 Review Tribunal, Ontario, Canada, the Vermont Superior Court, and the New Hampshire Site
38 Evaluation Committee, and in many other judicial and quasi-judicial settings.

39 **Q: What is the purpose and scope of your testimony in this proceeding?**

40 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

41 **Q: What portion(s) of the Application is your testimony sponsoring?**

42 A: Exhibit 15: Public Health and Safety (relating to sound and infrasound) and Exhibit 19: Noise and
43 Vibration.

44 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
45 **and supervision.**

46 A: Yes.

47 **Q:** In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or
48 documents produced by persons other than yourself/your company? If so, please cite these
49 sources. [These are independent studies, etc.]

50 **A:** References are provided in Exhibits 15 and 19.

51 **Q:** Does this conclude your testimony?

52 **A:** Yes.

Robert D. O'Neal, CCM, INCE Board Certified

Managing Principal

EDUCATION

M.S., Atmospheric Science, Colorado State University

B.A., Engineering Science, Dartmouth College

PROFESSIONAL REGISTRATION

Certified Consulting Meteorologist, #578

Institute of Noise Control Engineering,
Board Certified

PROFESSIONAL MEMBERSHIPS

American Meteorological Society

Institute of Noise Control Engineers (INCE),
Board Certified Member, Board of
Directors (2014-2016)

Acoustical Society of America

Mr. O'Neal is a Certified Consulting Meteorologist and is INCE Board Certified. He has more than 30 years of experience in the areas of community noise impact assessments, meteorological data collection and analyses, and air quality modeling. Mr. O'Neal's noise impact evaluation experience includes design and implementation of sound level measurement programs nationwide, modeling of future impacts, conceptual mitigation analyses, compliance testing, and expert witness testimony. He has also directed and reviewed shadow flicker studies for wind energy projects.

His expert witness testimony experience includes state and local boards, courts of law, and adjudicatory hearings. Specifically, Rob has testified before the MA Energy Facilities Siting Board, Maine Board of Environmental Protection, Vermont Superior Court, NH Site Evaluation Committee, NY DEC Administrative Law Judge, SD Public Utilities Commission, 42nd District Court of Texas, MA Land Court, Environmental Review Tribunals (Ontario, Canada), and Boards of County Commissioners.

Rob is a nationally recognized acoustics expert in the wind energy field having performed noise impact assessments in over 25 states across the U.S. and Canada.

Mr. O'Neal is active on siting and environmental committees associated with the wind and materials handling industries. He has presented the results of wind turbine low frequency noise and infrasound research at major conferences and peer-reviewed scientific journals. He was invited by the Commissioner of the Massachusetts Department of Environmental Protection to serve as a technical expert on the Wind Noise Technical Advisory Group (WNTAG). In addition, Rob has been an invited speaker at conferences on a variety of noise and meteorological topics.

RELEVANT PROFESSIONAL EXPERIENCE

- ◆ *Apex Clean Energy – Galloo Island Wind, Jefferson County, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 110-megawatt (MW) wind farm on an island in Lake Ontario. In addition to the technical noise studies, Epsilon provided input and response to comments for the Preliminary Scoping Statement and Stipulations as part of the Article 10 permitting process. The results will be presented as expert witness testimony during the NYS Public Service Board public hearings.
- ◆ *Apex Clean Energy – Lighthouse Wind, Orleans & Niagara Counties, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 200-megawatt (MW) wind farm in western NY. In addition to the technical noise studies, Epsilon provided input and response to comments for the Preliminary Scoping Statement and Stipulations as part of the Article 10 permitting process. The results will be presented as expert witness testimony during the NYS Public Service Board public hearings.
- ◆ *Avangrid Renewables– Deer River Wind, Lewis & Jefferson County, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 100-megawatt (MW) wind farm in the Tug Hill Plateau region of NY. In addition to the noise studies, Epsilon provided technical support as part of the Article 10 permitting process.
- ◆ *Avangrid Renewables– Mad River Wind, Oswego & Jefferson County, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 350-megawatt (MW) wind farm in the Tug Hill Plateau region of NY. In addition to the noise studies, Epsilon provided technical support as part of the Article 10 permitting process.
- ◆ *Avangrid Renewables– North Ridge Wind, St. Lawrence County, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 100-megawatt (MW) wind farm in northern NY. In addition to the noise studies, Epsilon provided technical support as part of the Article 10 permitting process.
- ◆ *Iberdrola Renewables – Groton Wind, Groton, NH.* Developed an extensive sound level measurement and modeling program for a proposed 48 MW wind farm near Plymouth, NH. Concurrent sound level data and meteorological data were collected and analyzed. The results were presented as expert witness testimony at community open houses and during the Site Evaluation Committee public hearings. Post-construction sound monitoring was conducted to confirm compliance with the permit conditions.
- ◆ *NextEra Energy Resources – Eight Point Wind, Steuben County, NY.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed 102-megawatt (MW) wind farm in the southern tier of NY. In addition to the noise studies, Epsilon provided technical support as part of the Article 10 permitting process.
- ◆ *Massachusetts Clean Energy Center – Research Study on Wind Turbine Acoustics.* The study includes measuring sound emissions from a variety of operating wind turbines in the Commonwealth of Massachusetts. Fieldwork includes measuring both the level and quality of sound emissions from operating wind turbines under various wind regimes and topography. To better understand how wind speed and wind direction vary over the turbine height, meteorological data are collected using on-site meteorological towers and LiDAR systems. Acoustical data are measured at various distances from the wind turbines and include broadband, one-third octave band, low frequency and infrasound, and interior/exterior sound levels.
- ◆ *Confidential Client – Wind Energy Project, VT.* Reviewed materials prepared by an opposing expert in anticipation of litigation due to noise from a wind energy project. Provided expert noise testimony before the Vermont Public Service Board on behalf of wind energy's legal counsel as part of a Technical Hearing.

- ♦ *Juwi Wind – Peru Wind Energy, Peru, MA.* Mr. O'Neal developed an extensive sound level measurement and modeling program for a proposed wind farm in western MA. In addition to the noise studies, Mr. O'Neal provided expert witness testimony as part of the local permitting process.
- ♦ *Eolian Renewable Energy – Antrim Wind, Antrim, NH.* Developed an extensive sound level measurement and modeling program for a proposed 30 MW wind farm in Antrim, NH. Concurrent sound level data and meteorological data were collected and analyzed. The results were presented as expert witness testimony at community open houses and during the NH Site Evaluation Committee public hearings.
- ♦ *NextEra Energy Resources – Lee-DeKalb Wind Farm, Lee & DeKalb County, IL.* Developed and executed a sound level compliance measurement program for a 218 MW wind farm in Illinois. Concurrent sound level data and meteorological data were collected and analyzed.
- ♦ *FPL Energy – Horse Hollow Wind Energy Center, Taylor County, TX.* Developed and executed an extensive sound level measurement program for a 735 MW wind farm in Taylor County, TX. Concurrent sound level data, meteorological data, and wind turbine power output data were collected and analyzed. The results were used in legal proceedings as part of expert witness testimony in the case.
- ♦ *FPL Energy – Wolf Ridge Wind Farm, Cooke County, TX.* Developed and executed an extensive sound level measurement and modeling program for a proposed wind farm in Cooke County, TX. Concurrent sound level data and meteorological data were collected and analyzed. The results were used in legal proceedings as part of expert witness testimony in the case.
- ♦ *John Deere Renewables –Michigan Thumb 1 Wind Farm, Huron County, MI.* Developed and executed a long-term sound level measurement program for an existing 69 MW wind farm in Michigan to determine compliance with the local noise ordinance. Concurrent sound level data and meteorological data were collected and analyzed.
- ♦ *NextEra Energy Resources (formerly FPL Energy) – Low Frequency & Infrasound Study, TX.* Developed and executed a sound level measurement program as part of a scientific study to determine low frequency and infrasound levels from two types of wind turbines. Both interior and exterior data were compared to independent impact criteria for audibility, vibration, rattle, and annoyance. The study results were published in the peer-reviewed Noise Control Engineering Journal.
- ♦ *NextEra Energy Resources (formerly FPL Energy) – Ashtabula Wind Farm, Barnes County, ND.* Developed and executed a sound level measurement program for an existing wind farm in North Dakota in response to noise complaints. Concurrent sound level data and meteorological data were collected and analyzed.
- ♦ *Gamesa Energy – Barton Chapel Wind Farm, Jack County, TX.* Developed an extensive sound level measurement and modeling program for a proposed 120 MW wind farm in Jack County, TX. Concurrent sound level data and meteorological data were collected and analyzed. The results were used in legal proceedings as part of expert witness testimony in the case.
- ♦ *Con Edison Development – Campbell County Wind, Campbell County, SD.* Mr. O'Neal conducted post-construction sound level measurements for a 93-megawatt (MW) wind farm in SD.
- ♦ *Babcock & Brown – Allegheny Ridge Wind Farm, Portage, PA.* Developed and executed a sound level measurement program for an 80 MW wind farm in Cambria and Blair Counties, PA. Concurrent sound level data, meteorological data, and wind turbine power output data were collected and analyzed. The

results were used to demonstrate compliance with the noise standard of the Development Agreement with the local Township.

♦ *State of New Hampshire, Office of the Attorney General – Lempster Mountain Wind Power Project, Lempster, NH.* Performed an independent review of a proposed 24 MW wind turbine farm. The applicant's noise impact analysis was evaluated and comments provided to the State of NH.

EXPERT TESTIMONY EXPERIENCE

Expert witness before the South Dakota Public Utilities Commission, on noise and shadow flicker for Dakota Range I and Dakota Range II Energy Facility Permit, Pierre, SD (2018). Case #EL18-003.

Expert witness before the North Dakota Senate Subcommittee of Energy and Natural Resources, Draft law on Sound Levels from Wind Energy Facilities, Bismarck, ND, NextEra Energy Resources, LLC (2017).

Expert witness before the Maine Board of Environmental Protection, on noise issues for the Juniper Ridge Landfill expansion, Old Town, ME (2016). Case #S-020700-WD-BI-N and #L-19015-TG-D-N.

Expert witness before the Board of Commissioners, Chowan and Perquimans Counties, NC, on blade and ice drop for Timbermill Wind Conditional Use Permit (2016).

Expert witness before the Environmental Review Tribunal (via skype), Ontario, Canada on noise issues for wpd White Pines Wind, Prince Edward County, Ontario [Case ERT 15-071, Alliance to Protect Prince Edward Co. v. Director, Ministry of the Environment] (2015).

Expert witness before the Jackson Township Board of Supervisors, Cambria County, PA on noise issues for a 980 MW natural gas-fired combined-cycle power generation plant (2015).

Expert witness before the Environmental Review Tribunal, Ontario, Canada on noise issues for Grey Highlands Clean Energy GP Corp., Grey Highlands, Ontario [Case ERT 15-026, Fohr v. Director, Ministry of the Environment] (2015).

Expert witness in Vermont Superior Court, Environmental Division, Docket No. 179-10-10; on noise issues for an aggregate extraction and crushing operation, McCullough Crushing, Calais, VT (2015).

Expert witness before the Environmental Review Tribunal, Ontario, Canada on noise issues for Grey Highlands Zero Emission People Wind Farm, Grey Highlands, Ontario [Case ERT 15-011, Dingeldein v. Director, Ministry of the Environment] (2015).

Prepared witness statement for the Environmental Review Tribunal, Ontario, Canada on noise issues for Niagara Region Wind Corporation, Haldimand County, Ontario [Case ERT 14-096, Mothers Against Wind Turbines, Inc. v. Director, Ministry of the Environment] (2015).

Expert witness before the Environmental Review Tribunal, Ontario, Canada on noise issues for SP Armow Wind Ontario GP Inc., Kincardine, Ontario [Case ERT 13-124 to 13-125, Kroeplin v. Director, Ministry of the Environment] (2014).

Expert witness before the Environmental Review Tribunal, Ontario, Canada on noise issues for K2 Wind Ontario, Inc., Ashfield-Colbourne-Wawanosh, Ontario [Case ERT 13-097 to 13-098, Drennan v. Director, Ministry of the Environment] (2013).

Expert witness before the Environmental Review Tribunal, Ontario, Canada on noise issues for Dufferin Wind Power, Melancthon, Ontario [Case ERT 13-070 to 13-075, Bovaird v. Director, Ministry of the Environment] (2013).

Expert witness before the NH Site Evaluation Committee on noise and shadow flicker issues for the 30 MW Antrim Wind Project (2012; 2016) Docket No. 2015-02 and Docket No. 2012-01; 48 MW Groton Wind project (2010) Docket No. 2010-01.

Expert witness before the MA Energy Facilities Siting Board on noise issues for: 18-mile underground electric transmission line and substation project in the Boston Metropolitan area (2004-2005); Billerica Energy Center power plant (2007); Brockton Clean Energy (2008-2009), West Medway II power plant (2015), Woburn-Wakefield electric transmission line (2016), National Grid gas pipeline—Lowell/Tewksbury (2018), Vineyard Wind (2018).

Expert witness in Vermont Act 250 Land Use proceedings on noise issues for a proposed sand and gravel excavation site at Okemo Mountain (2007). Permit No. 2S1122.

Expert witness in the 42nd District Court of Texas on noise issues for a 735 MW wind turbine farm (2006).

Expert witness before NY DEC Administrative Law Judge on noise issues for a hard rock quarry facility (1997), two sand and gravel excavation sites (2001; 2003), and a cogeneration power plant (2003).

Expert witness for site assignment hearings on noise issues from solid waste transfer stations in Lowell, MA (1998); Marshfield, MA (1999); Holliston, MA (2004); Oxford, MA (2006).

Expert witness in Massachusetts Land Court on noise issues for a proposed sand and gravel pit (1991), a proposed cross-dock distribution center (2002), and an existing concrete batch plant (2005).

Expert witness in Vermont Act 250 Land Use process for air quality impacts at ski areas (1991; 1992; 1997).

Expert witness before MA DEP Administrative Law Judge for an asphalt plant in Boston (1996).

Expert witness before municipal boards on issues of air pollution and noise impacts from local industries (many years).

Invited specialty speaker on noise impact assessments for Boston University's Masters of Urban Planning degree program (1994; 1996).

Publications

O'Neal, R.D., Hellweg, Jr., R.D. and R. M. Lampeter, 2011. Low frequency sound and infrasound from wind turbines. Noise Control Engineering Journal, 59 (2), 135-157.

O'Neal, R.D., and R.M. Lampeter, 2007: Sound Defense for a Wind Turbine Farm. North American Windpower, Zackin Publications, Volume 4, Number 4, May 2007.

O'Neal, R.D., 1991: Predicting potential sound levels: A case study in an urban area. Journal of the Air & Waste Management Association, 41, 1355-1359.

McKee, T.B. and R.D. O'Neal, 1989: The role of valley geometry and energy budget in the formation of nocturnal valley winds. Journal of Applied Meteorology, 28, 445-456.

Conference Presentations

- Kaliski, K., Bastasch, M., O'Neal R.D., 2018. Regulating and predicting wind turbine sound in the U.S. Presented at INTER-NOISE 2018, Chicago, IL
- O'Neal, R.D., 2017. Sound level impact studies for wind energy in NY State. Acoustical Society of America Fall Meeting, New Orleans, LA.
- Kaliski, K., O'Neal, R.D., et al 2016. Massachusetts Research Study on Wind Turbine Acoustics: Over view and Conclusions. NOISE-CON 2016, Providence, RI.
- O'Neal, R.D., 2014. Wind Energy Sound Monitoring Under High Wind Shear Conditions. NOISE-CON 2014, Fort Lauderdale, FL.
- O'Neal, R.D. Lampeter, R.M., Emil, C.B. and B.A. Gallant, 2012. Evaluating and controlling noise from a metal shredder system. Presented at INTER-NOISE 2012, NY, NY.
- O'Neal, R.D., 2011. Wind Turbine sound Levels: The Michigan I, Huron County, MI Study. Presented at Great Lakes Wind Collaborative 4th Annual Meeting, Ypsilanti, MI.
- O'Neal, R.D., Hellweg, Jr., R.D. and R. M. Lampeter, 2011. Low frequency sound and infrasound from wind turbines. Presented at WINDPOWER 2011, Anaheim, CA.
- O'Neal, R.D., Hellweg, Jr., R.D. and R. M. Lampeter, 2010. Low frequency sound and infrasound from wind turbines – a status update. NOISE-CON 2010, Baltimore, MD.
- O'Neal, R.D., 2010. Noise control evaluation for a concrete batch plant. NOISE-CON 2010, Baltimore, MD.
- O'Neal, R.D., and R.M. Lampeter, 2009: Nuisance noise and the defense of a wind farm. INTER-NOISE 2009, Ottawa, Canada, August 23-26, 2009.
- O'Neal, R.D., and R.M. Lampeter, 2009: Sound from Wind Turbines: A Key Factor in Siting a Wind Farm. 12th Annual Energy & Environment Conference – EUEC 2009, Phoenix, AZ, February 2, 2009.

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

SARAH BOUCHER GRAVEL, PROJECT MANAGER

STANTEC CONSULTING SERVICES, INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Sarah Boucher Gravel, Stantec Consulting Services, Inc. (Stantec), 30 Park Drive, Topsham, ME
3 04086.

4 **Q: What is your position at Stantec?**

5 A: I am a Project Manager at Stantec.

6 **Q: How long have you been employed by Stantec?**

7 A: I have been employed by Stantec for 10 years.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Science degree in wildlife biology from the University of Vermont and a
10 Master of Philosophy degree in human ecology from the College of the Atlantic and am a certified
11 wildlife biologist. Prior to joining Stantec I was employed as a Lands Assistant for the National Park
12 Service where I was responsible for maintaining a spatial database of parcels within and adjacent to
13 a national park.

14 **Q: Please describe your current responsibilities with Stantec.**

15 A: As a certified wildlife biologist and project manager at Stantec, I am responsible for conducting
16 environmental surveys to fulfill permitting and compliance requirements for wind projects in the
17 eastern United States. In that capacity, I consult with agencies and developers concerning project
18 impacts and prepare applications for wind energy projects. I am also responsible for providing
19 support on wildlife issues for wind energy projects, including assisting in the preparation of
20 cumulative effects and habitat fragmentation analyses, drafting assessments of avian impacts of
21 wind energy projects, conducting bat site characterization studies and habitat assessments, and
22 developing habitat and bird and bat conservation strategies, including eagle conservation plans.

23 **Q: Have you previously testified before the New York State Public Service Commission or Siting
24 Board on Electric Generation?**

25 A: No.

26 **Q: Have you previously served as an expert witness before any other court, agency, or other**
27 **body on the subject you plan to offer testimony on today?**

28 A: No.

29 **Q: What is the purpose and scope of your testimony in this proceeding?**

30 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

31 **Q: What portion(s) of the Application is your testimony sponsoring?**

32 A: Exhibit 3, Location of Facilities; Exhibit 28, Environmental Justice; Exhibit 31, Local Laws and
33 Ordinances; Exhibit 32, State Laws and Regulations; and Exhibit 33, Other Applications and Filings.

34 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
35 **and supervision.**

36 A: Yes.

37 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
38 **documents produced by persons other than yourself/your company? If so, please cite these**
39 **sources. [These are independent studies, etc.]**

40 A: References, if any, are provided in the Exhibits identified above.

41 **Q: Does this conclude your testimony?**

42 A: Yes.

Sarah is a Certified Wildlife Biologist and Project Manager who conducts and pursues environmental surveys to fulfill permitting and compliance requirements of wind projects in the eastern US. She consults with agencies and developers and understands the ecological impacts of wind projects and wildlife-related federal and state regulations, particularly in Maine and New York. Sarah currently acts as Deputy Project Manager for a wind energy project preparing a New York State's Article 10 Certificate Application, and for three wind energy projects has assisted in preparing documents in support of Exhibit 22 of the permit application. She has two years of NEPA experience, and has authored the wildlife, avian, and bat sections of multiple Environmental Assessments. In addition, Sarah authors a variety of documents including critical issues analyses for wildlife, avian and bat site characterization studies, habitat assessments, eagle conservation plans, and bird and bat conservation strategies. Sarah has performed diverse avian and bat field studies for a number of projects in the eastern US.

Sarah's previous experience includes banding and conducting various studies of seabirds on a Maine island, serving as Lands Assistant for the National Park Service in Acadia, and conducting research of Wilson's plovers for the Defense Coastal/Estuarine Research Program at Camp Lejeune Marine Base, NC.

EDUCATION

40-hr HAZWOPER, Stoughton, Maine, 2013

Master of Philosophy, Human Ecology, College of the Atlantic, Bar Harbor, Maine, 2006

Bachelor of Science, Wildlife Biology, University of Vermont, Burlington, Vermont, 2004

Wilderness First Aid Certified, SOLO, Topsham, Maine, 2012

Heartsaver CPR Certified, SOLO, Topsham, Maine, 2012

MEMBERSHIPS

Member, The Wildlife Society

AWARDS

2006 Martin Dibner Fellowship, Poetry/Creative Writing

2006 Kathryn Davis Advanced International Study Award

2005 Student Paper Award at the Waterbirds Society Meeting, Jekyll Island, GA, Habitat Selection in the Black Guillemot

PROJECT EXPERIENCE

Assessment, Permitting and Compliance

Article 10 Certificate Application Preparation (Deputy Project Manager)

Coordinated preparation of and authoring an Article 10 Certificate Application for a wind energy project.

Program Management Support, Offshore Wind Energy Project (Deputy Project Manager)

Supported overall program management including providing status updates related to permitting, technical report authoring and review, filing, agency meeting participation and meeting documentation for a proposed offshore wind energy project.

Sarah Boucher Gravel, CWB

Wildlife Biologist, Project Manager

Article 10 Certificate Application Support, Three Wind Projects, New York (Biologist)

Assisted in the preparation of cumulative effects and habitat fragmentation analyses examining direct and indirect impacts to birds, bats, and other wildlife, as well as adaptive management plans, in support of permitting efforts.

NEPA Support, HCP EA, Two Confidential Wind Projects (Biologist)

Drafted sections of an Environmental Assessment related to avian impacts and sections of a Habitat Conservation Plan related to bat impacts for 2 wind projects in Indiana and Illinois.

Pioneer Trail Wind Project HCP EA, USFWS, Ford and Iroquois Counties, Illinois

Assisted in the preparation of an Environmental Assessment to address the effects of a Habitat Conservation Plan for the Indiana bat and northern long-eared bat.

Interim Conferencing for Northern Long-eared Bat, Two Wind Projects, New York (Project Manager)

Initiating Conferencing with the New York Field Office of the USFWS for 2 proposed wind projects in central and western New York.

Programmatic Eagle Conservation Plan (ECP), 12 Wind Projects, Northeast (Project Manager)

Assisted in drafting an ECP in advance of applying for a programmatic incidental take permit for bald eagles. The ECP will discuss eagle-related pre- and post-construction data, use weight-of-evidence risk assessment to assess potential and apparent risk to eagles, and interpret quantitative collision risk results to estimate take at 12 wind projects in the Northeast.

Bird and Bat Risk Assessment, New Creek Wind Project, WV and Coye Hill Wind Project, CT (Biologist)

Assisted in drafting a weight-of-evidence risk assessment discussing pre- and post-construction data and potential and apparent risk to birds and bats at a large wind project in WV and a community-scale wind project in CT.

Northern long-eared bat habitat assessment, MDOT, Maine (Biologist)

Assisted in managing and conducting site visits at over 20 sites in Maine to assess potential habitat and roost trees in advance of potential federal and state listing of this species of conservation concern.

Northern long-eared bat presence / absence surveys, Vermont (Project Manager)

Consulted with VTANR, designed survey protocol according to federal guidance, provided oversight and quality control of reporting.

MDEP permit application preparation for the Passadumkeag Wind Project and a second Maine project (Project Manager)

Authored the Wildlife Reports for two permit applications completed in February and November 2012. For the Passadumkeag Project, also attended agency meetings, developed the work plan for avian and bat studies, and conducted breeding bird surveys at the Project in spring 2011.

Sarah Boucher Gravel, CWB

Wildlife Biologist, Project Manager

Meteorological tower permit application preparation, Maine (Project Scientist)

Prepared several applications for met tower construction at potential commercial wind sites. Applications included detailed, site-specific information related to various environmental conditions including vegetation and soil type, soil hydrology, and distance calculations to known and mapped resources and features.

LURC permit application preparation for Bull Hill and Rollins Wind Projects, Maine (Project Scientist)

Authored the Wildlife Report for two LURC applications completed in late 2010 and early 2011 for these two utility-scale projects in Maine. Involved data analysis, data summary, research and cross-division collaboration. Performed radar and raptor field surveys at both projects and eagle activity monitoring at the Rollins Wind Project in summer 2011.

Shorebird and Coastal/Marine

EA, NPS, New York

Assisted in the preparation of an Environmental Assessment to address the effects of enhancing park facilities on birds, particularly migratory songbirds, and bats.

Biddeford Pool Habitat Assessment, Maine (Project Manager and Field Biologist)

Assessed potential impacts to bird nesting habitats and performed an investigation of potential habitat fragmentation impacts as a result of boardwalk construction in sensitive habitat. Involved a habitat assessment, consultation with MDEP and MDIFW, and a comprehensive biological report.

Shorebird Stopover Surveys, Downeast, Maine (Field Biologist)

Conducted shorebird stopover surveys on a tidal cove for a coastal development project in Downeast Maine. Required visual identification of multiple shorebird species.

Benthic Macroinvertebrate Sampling, Hudson River, New York (Field Biologist)

Conducted benthic sampling on an open barge at multiple sites in New York Harbor in support of long-term monitoring efforts of the Hudson River. Worked with a petit ponar. Processed samples, recorded sample characteristics, maintained the sample list, and prepared samples for shipment to the lab.

Winter Eagle Use and Avian Studies at Proposed Wind Project, Downeast, Maine (Project Manager)

Conducted winter eagle use surveys consistent with USFWS Guidelines to obtain data on eagle behavior for collision risk assessment. Also conducted breeding bird surveys and raptor migration surveys at this remote coastal site.

Upland Sandpiper and Grassland Bird Surveys, Proposed Wind Project, Downeast, Maine (Task Manager)

Managed field surveys targeting State-listed threatened upland sandpiper and other grassland bird surveys at the request of the Maine Department of Inland Fisheries and Wildlife. Assisted with work plan preparation, species research, study design, and managed all aspects of field surveys, data analysis, statistical analysis, and reporting.

Sarah Boucher Gravel, CWB

Wildlife Biologist, Project Manager

Natural Resource Services

Site Characterization Study for Wildlife, New Hampshire Project (Project Manager)

Conducted a site visit and prepared a report addressing potential wildlife issues (i.e., rare, threatened, and endangered species) as they related to federal and state laws and permitting.

Wildlife Section of a Critical Issues Analysis (CIA), New Hampshire Project (Project Manager)

Addressed potential wildlife issues (i.e., rare, threatened, and endangered species) as they related to federal and state laws and permitting as part of a CIA.

Bird and Bat Conservation Strategy (BBCS) for the Passadumkeag, Oakfield, Bingham, and Hancock Wind Projects (Project Manager)

Authored the BBCS for these permitted wind projects in Maine in which potential impacts to birds, including eagles, and bats, was assessed. Discussed avoidance and minimization strategies.

Long-Term Biological Monitoring, Former Loring Air Force Base, Limestone, Maine (Project Manager)

Managed all aspects of the fourth year of biological monitoring at this PCB-contaminated site in Aroostook County, Maine. Included work for a prime consultant and agency consultation with MDEP, MDIFW, USFWS, and the USEPA. Developed a Biological Monitoring Quality Program Plan. Field-based studies included stream macroinvertebrate assessments, sediment sampling, and electro-fishing via boat (in ponds) and wading (in streams) for brook trout (*Salvelinus fontinalis*). Processed fish tissue and sediment samples and tracked and shipped samples to 5 laboratories for analysis.

US Customs and Border Protection Rare, Threatened and Endangered Species Survey, Maine (Project Manager)

Managed all aspects of this field intensive project for which we performed over 60 site visits throughout the State of Maine to assess the presence of rare, threatened or endangered wildlife species and their habitats. Involved intense logistical planning, interpretation of site designs, and making effects determinations for this unique project.

Renewable Energy

Riverbank Wiscasset Energy Project, Lincoln County, Maine (Writer and Researcher)

Researched natural resource-related issues and potential impacts relevant to a proposed 1,000 megawatt renewable energy project, as part of state and federal permit planning and FERC licensing activities. Tasks included reviewing recreational impacts, water quality and quantity issues, and socio-economic impacts of the project. Researched the town's Comprehensive Plan and other pertinent water resource management studies. Served as the primary author of these sections of the FERC pre-application document.

Wind Farm Development

Post-Construction Bird and Bat Fatality Monitoring, Oakfield Wind Project (Project Manager)

Managed all aspects of post-construction avian and bat surveys at this 49-turbine wind farm in northern Maine. Assisted in work plan development and agency negotiations, Managed field activities including ground-based fatality searches, eagle use surveys, and acoustic bat surveys.

Sarah Boucher Gravel, CWB

Wildlife Biologist, Project Manager

Six Wind Projects, New York (Project Manager)

Managed all aspects of pre-construction avian and bat surveys at 6 projects in central and western New York, including work plan development, agency consultation and approval, habitat surveys, and field studies: raptor migration, breeding bird and migrating bird studies, eagle use surveys, and acoustic bat surveys. Surveys were conducted in accordance with NYSDEC Guidelines.

Bird and Bat Conservation Strategy (BBCS) and Eagle Conservation Plan (ECP) for Three Wind Projects, Maine, Utah (Project Manager)

Provided technical edits and/or prepared BBCS and/or ECP documents in which potential impacts to birds, including eagles, and bats, was assessed. Incorporated permit conditions. Discussed avoidance and minimization strategies and adaptive management. For a project in Utah, developed an analytical approach which incorporated visual monitoring and turbine operations data to understand causes of eagle fatalities.

Breeding Bird Surveys, Windham County, Vermont (Field Biologist)

Conducted breeding bird surveys to assess breeding bird composition at a proposed 30-turbine project in southeast Vermont.

Avian Studies at Weaver Wind Project, Hancock County, Maine (Field Biologist)

Conducted breeding bird surveys, great horned owl playback surveys (targeting nesting raptors), nocturnal radar surveys, raptor migration surveys, and eagle use surveys consistent with USFWS Guidelines.

Rollins Wind Project Eagle Monitoring, Penobscot County, Maine (Project Manager)

Managed post-construction eagle activity monitoring during the first full year of operation at the Project per the eagle monitoring work plan prepared by Stantec and approved by MDIFW and USFWS in 2011. Surveys include aerial nest monitoring, eagle activity monitoring during migration, and an operational adjustment study during the fledgling period.

Avian and Bat Risk Identification Report for Two Projects, Massachusetts (Project Manager)

Authored reports and managed all aspects of its completion. Involved preparing agency letters, data summary, in-depth research of natural history information on multiple avian species, map and figure preparation, and desktop site analysis.

Tenney Mountain Wind Project Avian Studies, Grafton County, New Hampshire (Project Technician)

Conducted raptor surveys to determine species, location and behavior in relation to proposed wind turbines. Analyzed raptor migration data for reporting purposes related to impact assessment and permitting efforts.

Hounsfield Wind Project Avian Migration Surveys, Jefferson County, New York (Project Technician)

Conducted radar and night-vision surveys for 30 days to assist in surveying fall avian migration. Responsible for all aspects of radar including maintenance and operations. Involved extensive field work on a remote island on Lake Ontario.

Sarah Boucher Gravel, CWB

Wildlife Biologist, Project Manager

Rollins Wind Project Eagle Surveys, Penobscot County, Maine (Project Technician)

Assisted in pre-construction impact studies as part of state and federal permitting and impact assessments for a utility-scale wind farm.

Performed eagle surveys at the Rollins Ridge site to determine the amount of eagle activity on or near the ridge. Recorded other raptor species, location and behavior, as well as incidental birds near the observation site.

Stetson Mountain Wind Farm, Bull Hill Wind Farm, Maine Post-Construction Monitoring (Project Technician)

Assisted in post-construction monitoring program for the first wind project permitted within the State's unorganized territories, and a recently built project. Conducted searches each week for avian fatalities. Identified species and performed ground condition and scavenger surveys. Involved extensive field work for six months.

PUBLICATIONS

The Aerosphere as Wildlife Habitat – Managing Risk. Oral presentation at the Northeast Fish and Wildlife Association Conference, Portland, Maine, April, 2014.

Taking a New Look at Curtailment Standards. (co-author). Article published in North American Windpower, June, 2014.

Presentation of GIS component of the Island Monitoring Project. Technical presentation to the Island Monitoring Task Force and members of the Maine Island Trail Association and National Park Service, Augusta, Maine, February, 2006.*

Where can a pair nest around here? Habitat Selection in the Black Guillemot on Great Duck Island, Maine. Oral presentation at the 24th meeting of the International Ornithological Congress, Hamburg, Germany, August, 2006.*

Habitat Selection in the Black Guillemot. Poster presentation at the 122nd meeting of the American Ornithologists' Union in Quebec City, Canada, Summer, 2004.*

** denotes projects completed with other firms*

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

TREVOR S. PETERSON, PROJECT MANAGER

AND SENIOR WILDLIFE BIOLOGIST

STANTEC CONSULTING SERVICES INC.

1 **Q: Please state your name, employer, and business address.**

2 A: Trevor S. Peterson, Stantec Consulting Services Inc. (Stantec), 30 Park Drive, Topsham, ME 04086.

3 **Q: What is your position at Stantec?**

4 A: I am a Project Manager and Senior Wildlife Biologist at Stantec.

5 **Q: How long have you been employed by Stantec?**

6 A: I have been employed by Stantec since 2003.

7 **Q: Please describe your educational background and professional experience.**

8 A: I received a Bachelor of Science degree in biology/environmental studies *summa cum laude* from
9 Bowdoin College in Brunswick, Maine, and am currently a PhD candidate in ecology and
10 environmental science at the University of Maine, where I am researching the use of long-term
11 acoustic bat data to study bat migration and predict and manage potential impacts from land-based
12 and offshore wind projects. Shortly after graduating from Bowdoin College, I began my professional
13 career at Woodlot Alternatives where I worked as a Project Manager until 2007 when Stantec
14 acquired Woodlot Alternatives. Since joining Stantec, I have specialized in renewable energy
15 projects, bird and bat migration, and rare species assessments. I have authored or co-authored
16 several peer-reviewed papers on bat biology and given numerous presentations on a host of subjects
17 relating to bats generally and to the impact of wind projects on bats, including managing the risk to
18 bats with acoustics, potential risks to bats from onshore and offshore wind projects, bat tracking,
19 acoustic bat surveys and other subjects. A copy of my resume is attached.

20 **Q: Please describe your current responsibilities with Stantec.**

21 A: As a Senior Wildlife Biologist and Project Manager at Stantec, I specialize in renewable energy
22 projects, bird and bat migration, and rare species assessments, with a focus on developing solutions
23 for quantifying and managing wildlife impacts at terrestrial and offshore commercial wind projects.

24 My responsibilities include: wildlife and rare species surveys, acoustic bat monitoring and rare bat
25 assessments, breeding bird, raptor, and nocturnal radar surveys; surveys at proposed and existing
26 wind projects; post construction avian and bat mortality monitoring at wind energy projects; vernal
27 pool water quality and ecological monitoring; rare turtle telemetry and demographic studies; natural
28 community characterization; and vegetation monitoring.

29 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
30 **Board on Electric Generation?**

31 A: I provided expert testimony related to potential impacts to bats for the proposed Cassadaga Wind
32 Project (Case 14-F-0490).

33 **Q: Have you previously served as an expert witness before any other court, agency, or other**
34 **body on the subject you plan to offer testimony on today?**

35 A: I provided written and oral testimony on potential impacts to birds and bats at the proposed Laurel
36 Mountain Wind Energy Project in West Virginia before the West Virginia Public Service Commission
37 (Case No. 08-0109-E-CS-CN).

38 **Q: What is the purpose and scope of your testimony in this proceeding?**

39 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

40 **Q: What portion(s) of the Application is your testimony sponsoring?**

41 A: Exhibit 22, Terrestrial Ecology and Wetlands (bat impacts only).

42 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
43 **and supervision.**

44 A: Yes.

45 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
46 **documents produced by persons other than yourself/your company? If so, please cite these**
47 **sources. [These are independent studies, etc.]**

48 A: References, if any, are provided in Exhibit 22 and the accompanying reports.

49 **Q: Does this conclude your testimony?**

50 A: Yes.

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist



Mr. Peterson is a senior wildlife biologist and project manager specializing in renewable energy projects, bird and bat migration, and rare species assessments. He focuses on solutions to quantify and manage turbine-related wildlife impacts at terrestrial and offshore commercial wind projects. Since joining the company in 2003, Trevor's project experience has included a wide range of wildlife surveys at proposed and existing wind projects, rare bat surveys, breeding bird surveys, raptor surveys, nocturnal radar surveys, vernal pool water quality and ecological monitoring, rare turtle telemetry and demographic studies, natural community characterization, and vegetation monitoring. He is a PhD candidate in the University of Maine's Ecology and Environmental Science program, where he is researching the use of long-term acoustic bat data to study bat migration and predict and manage potential impacts from land-based and offshore wind projects. Before working at Stantec, Trevor worked seasonally for the National Park Service at Acadia National Park and Isle Royale National Park and as an island caretaker for the Maine Island Trail Association. Mr. Peterson serves as Stantec's technical lead for acoustic bat surveys, responsible for updating equipment, survey methods, and data analysis/reporting methods.

PROFESSIONAL EXPERIENCE

- Stantec Consulting Services Inc. 2007-present. Project Manager and Senior Wildlife Biologist
- Woodlot Alternatives, Inc. 2003-2007. Project Manager
- Acadia National Park. 2000. Biological Technician
- Isle Royale National Park. 1999. Biological Technician

EDUCATION

PhD candidate in Ecology and Environmental Science program, University of Maine, Orono, Maine, 2017

Semester Program in Costa Rica, Tropical Field Biology, Environmental Studies, and Spanish, Duke University, Durham, North Carolina, 2000

AB, Biology/Environmental Studies, Summa cum Laude, Phi Beta Kappa, Bowdoin College, Brunswick, Maine, 2002

40-Hour Hazwoper Certification, OSHA, Topsham, Maine, 2005

OSHA 8-Hour HAZWOPER Refresher Certification, Topsham, Maine, 2017

McMillan Offshore Survival Training, Castine, Maine, 2016

MEMBERSHIPS

Member, The Wildlife Society, Maine

Member, Northeast Bat Working Group

Member, Northeast Regional Migration Monitoring Network

PROJECT EXPERIENCE

Renewable Energy, Offshore

Tracking Bats using Nanotag Telemetry in the Gulf of Maine

Senior Biologist and Project Manager. Developed and implemented survey techniques to track bats along the Maine coast using nanotag technology. Constructed and installed 5 telemetry receivers along the coast to supplement an existing network of monitoring stations. Project was funded by Stantec and supported by federal, state, academic, and NGO partners.

* denotes projects completed with other firms

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Regional Offshore Acoustic Bat Monitoring, Gulf of Maine, mid-Atlantic, Great lakes

Senior Biologist and Project Manager. Developed and implemented survey techniques and data analysis for long-term (2009–2014) acoustic bat monitoring in the Gulf of Maine, mid-Atlantic, and Great Lakes. Surveys included long-term monitoring at over 40 locations including remote islands, offshore weather buoys, ships, and coastal sites. Project was funded by Stantec, the US Department of Energy, and supported by federal, state, academic, and NGO partners.

Renewable Energy

Pre-construction Avian and Bat Surveys at Proposed Wind Energy Project, Texas

Project Manager and Field Supervisor. Developed an innovative work scope to conduct a variety of field surveys focusing on assessing potential impacts to Mexican free-tailed bats and managed a variety of field surveys including nocturnal radar surveys, NEXRAD data analysis, acoustic bat monitoring, and visual night-vision surveys. Mr. Peterson also coordinated discussions between project developers, state wildlife agencies, and non-profit groups.

Avian and Bat Surveys at proposed New Creek Wind Energy Project, Grant County, West Virginia

Project Manager, Field Supervisor, Expert Witness. Developed protocols for pre-construction and post-construction bird and bat field surveys within wind project. Coordinated field efforts, including breeding bird surveys, raptor surveys, bat mist-netting surveys, bat telemetry surveys, acoustic bat surveys, carcass monitoring, and curtailment studies. Managed correspondence between the developer, operator, and state and federal wildlife agencies. Prepared survey reports, a site-specific bird and bat risk assessment, and direct testimony, all of which were presented at public hearings.

Avian and Bat Surveys at Laurel Mountain Wind Energy Project, Randolph and Barbour Counties, West Virginia

Project Manager, Field Supervisor, Expert Witness. Conducted bird and bat field surveys within proposed wind project. Coordinated pre-construction and post-construction field efforts, including breeding bird surveys, raptor surveys, bat mist-netting surveys, acoustic bat surveys, carcass monitoring, and curtailment studies. Managed correspondence between the developer, operator, and state and federal wildlife agencies. Prepared survey reports, avian bird and bat risk assessment, testimony, and a site-specific Avian and Bat Protection Plan.

** denotes projects completed with other firms*

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Avian and Bat Surveys at Armenia Mountain Wind Energy Project, Tioga and Bradford Counties, Pennsylvania

Project Manager and Field Supervisor. Conducted bird and bat field surveys within proposed wind project. Coordinated field efforts, including breeding bird surveys, raptor surveys, bat mist-netting surveys, and acoustic bat surveys. Managed correspondence between the developer and state and federal wildlife agencies. Prepared survey reports and a site-specific bird and bat risk assessment for the project. Managed two years of post-construction monitoring according to Pennsylvania Game Commission protocols.

Post-construction Avian and Bat Mortality Monitoring at Forward and Lookout Wind Projects, Somerset County, Pennsylvania

Project Manager and Field Supervisor. As the Project Manager for post-construction bird and bat mortality surveys at two of the first operational wind projects to participate in Pennsylvania's Voluntary Cooperative Wind Energy agreement, Mr. Peterson developed survey work scopes, and coordinated fieldwork for multiple years of monitoring, including daily mortality surveys, acoustic bat surveys, and diurnal raptor surveys. Mr. Peterson also coordinated project-related agency communications with state and federal wildlife agencies.

Natural Resource Services

Acoustic Bat Surveys: Proposed Road Corridors, Tennessee

Technical and Field Supervisor. Conducted acoustic bat surveys in a variety of habitats within 67-kilometer long segments of multiple potential highway corridors within a National Forest for the Tennessee Department of Transportation. Completed data analysis and prepared survey reports.

Indiana Bat and Rare Bird Surveys at Proposed Wind Energy Project, Jefferson and Oswego Counties, New York

Project Manager and Field Supervisor. Coordinated multiple years of habitat evaluations, acoustic bat surveys, and radio telemetry surveys for Indiana bats at a proposed wind project in northwestern New York. Mr. Peterson also coordinated and conducted field surveys for breeding birds and rare birds within the area.

Spotted Turtle and Vernal Pool Monitoring on Greenbush Railroad, Southeastern Massachusetts

Project Manager, Field Team Leader, Field Technician. Managed a field crew responsible for monitoring the water quality, invertebrate diversity, amphibian populations, and plant communities within vernal pools located in a commuter rail corridor. Led efforts to document and track populations of spotted turtles within the same corridor. Assisted with development of amphibian/turtle crossing structures, and protocols for testing the effectiveness of these structures.

** denotes projects completed with other firms*

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Natural Community Surveys and Resource Inventory, Moosehead Lake Region, Maine
Field Scientist. Mr. Peterson conducted natural community surveys and rare species surveys, classified natural communities, identified rare plants and animals, and evaluated potential wildlife habitat within parcels proposed for development and conservation within a large proposed development in Maine's north woods.

Eastern Box Turtle Protection Plan, Construction Monitoring, and Relocation, Duxbury, Massachusetts

Field Scientist. Mr. Peterson developed a protocol to protect box turtles during construction in compliance with MESA, and participated in fieldwork efforts, which included pre-construction searches, construction monitoring, turtle handling/relocation, and habitat management.

Blue-Spotted Salamander Surveys and Relocation, Reading, Massachusetts

Field Scientist. Mr. Peterson developed and implemented a survey protocol to inventory, identify, and relocate blue and yellow-spotted salamanders from an upland area proposed for development. Coordinated communications with state wildlife agencies.

Diamondback Terrapin Habitat Assessment and Nesting Surveys, Massachusetts

Field Scientist. Mr. Peterson developed survey protocols and conducted an assessment of suitable habitat features to evaluate mating and nesting activities of a newly discovered diamondback terrapin population at a former landfill proposed for mixed use development in southern Massachusetts.

PUBLICATIONS

Peterson, T.S. Bats in the rotor zone...managing risk with acoustics. Presented at the 2nd International Bat Echolocation Symposium, Tuscon, Arizona, 2017.

Peterson, T.S. and A.J. Gravel. How do mortality and activity relate?. Presented at the American Wind Energy Association Wind Project Siting and Environmental Compliance Conference, Austin, Texas, 2017.

Peterson, T.S. Unprecedented change in Maine bats; evidence of the widespread effects of white-noise syndrome. Presented at the Maine Chapter of the Wildlife Society 41st Annual Meeting, Bangor, Maine, 2017.

Peterson, T.S., S.K. Pelletier and M. Giovanni. Long-term bat monitoring on islands, offshore structures, and coastal Sites in the Gulf of Maine, mid-Atlantic, and Great Lakes - final report. Prepared for the US Department of Energy, 2016.

Peterson, T.S. Bats in the rotor zone...managing risk with acoustics. Presented at the National Wind and Wildlife Coordinating Collaborative Wind and Wildlife Research Meeting XI, Broomfield, Colorado, 2016.

Peterson, T.S. Bats offshore!. WREN Webinar Presented Online, 2016.

Peterson, T.S. Managing risk to bats at offshore wind projects: Applying Lessons Learned from Onshore. Presented at the Northeast Bat Working Group, South Portland, Maine, 2015.

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Peterson, T.S., S. Pelletier. Bats Offshore...Results of a long-term regional acoustic study. Poster Presentation at the American Wind Energy Association Offshore WindPower 2015, Baltimore, Maryland, 2015.

Peterson, T.S., S. Pelletier, S. Boyden, L. Wight, and K. Watrous. Tracking bats on the Maine coast using nanotags. Presented at the Northeast Natural History Conference, Springfield, Massachusetts, 2015.

Peterson, T.S. Northern long-eared bats and potential impacts on wind projects in New England. Marine Ocean & Wind Industry Initiative Webinar Presented Online, 2015.

Peterson, T.S., S.K. Pelletier, S.A. Boyden, and K.S. Watrous. Offshore acoustic monitoring of bats in the Gulf of Maine. *Northeastern Naturalist* 21(1): 86-107, 2014.

Peterson, T.S., S. Pelletier, S. Boyden, L. Wight, and K. Watrous. Tracking bats offshore using nanotag technology - a pilot study in the Gulf of Maine. Presented at the Energy Ocean International Conference, Atlantic City, New Jersey, 2014.

Peterson, T.S., S. Pelletier, S. Boyden, L. Wight, and K. Watrous. Where, When and Why are Bats Offshore...and What are the Implications for Offshore Wind Energy?. Presented at the Northeast Fish and Wildlife Conference, Portland, Maine, 2014.

Peterson, T.S., S. Boucher, and L. Berube. The aerosphere as wildlife habitat - managing risk.. Presented at the Northeastern Association of Fish and Wildlife Agencies, Portland, Maine, 2014.

Hildt, S. and T. Peterson. Surveying the damage: tools and techniques. Invited Presentation at the NRDA Short Course, University of Massachusetts, 2014.

Pelletier, S.K., K.S. Omland, K.S. Watrous and T.S. Peterson, Information synthesis on the potential for bat interactions with offshore wind facilities - final report. US Department of the Interior, Bureau of Ocean Energy Management, Headquarters. Herndon, Virginia. OCS Study BOEM 2013-01163. 119 pp, 2013.

Pelletier, S.K. and T.S. Peterson. Wind Power & Bats Offshore - What are the risks? A current understanding of offshore bat activity. Presented at the American Wind Energy Association Offshore WindPower 2013, Providence, Rhode Island, 2013.

Peterson, T.S., S. Boyden, and K. Watrous. Comparison of Automated and Manual Identification Methods for Acoustic Bat Survey Datasets: Implications for Future Protocols. Poster Presentation at the Northeast Bat Working Group Meeting: Albany, New York, 2013.

Pelletier, S.K., T. Peterson, S. Boyden, K. Watrous, and J. Perkins. Ongoing Offshore Acoustic Bat Research in the Atlantic and Great Lakes Regions. Poster Presentation at the Northeast Bat Working Group Meeting: Albany, New York, 2013.

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Johnson, J.S., L.E. Dodd, J.D. Kiser, T.S. Peterson, and K.S. Watrous. Food Habits of *Myotis leibii* along a Forested Ridgetop in West Virginia. *Northeastern Naturalist* 19(4): 665-672, 2012.

Peterson, T.S. A New Look at Bat Activity and Wind Speed in the Rotor Zone. Poster Presentation at the Northeast Bat Working Group Meeting: Carlisle, Pennsylvania, 2012.

Peterson, T.S., J. Costa, K. Omland, and K. Watrous. Use of Pre-construction Acoustic Bat Data to Design and Forecast Site-specific Curtailment Plans. Poster Presentation at the NWCC Wind Wildlife Research Meeting IX: Denver, Colorado, 2012.

Johnson, J.S., K.S. Watrous, G.J. Giumarro, T.S. Peterson, S.A. Boyden, and M.J. Lacki. Seasonal and geographic trends in acoustic detection of tree-roosting bats. *Acta Chiropterologica*, 13(1): 157-168, 2011.

Johnson, J.S., J.D. Kiser, K.S. Watrous, and T.S. Peterson. Day-roosts of *Myotis leibii* in the Appalachian Ridge and Valley of West Virginia. *Northeastern Naturalist* 18 (1): 95-106., 2011.

Peterson, T.S., S.K. Pelletier, S.A. Boyden. Acoustic Survey of Offshore Bat Activity and Migration in the Gulf of Maine. Presentation at the Maine Chapter of the Wildlife Society Wind and Wildlife Meeting, Orono, Maine, 2011.

Peterson, T.S. A Discussion of a Suitable Framework and Scale for Modeling and Managing Impacts to Migratory Bats at Wind Projects. Presented at the NWCC Wind Wildlife Research Meeting VIII; Lakewood, Colorado, 2010.

Giumarro, G.J., K.S. Watrous, J.S. Johnson, T.S. Peterson, S.A. Boyden, and M.J. Lacki. Correlation of bat acoustic activity to bat mortality in the eastern United States: a broader understanding of seasonal and geographic trends in acoustic detection of tree-roosting bats. Presented at the NWCC Wind Wildlife Research Meeting VIII, Lakewood, Colorado, 2010.

Peterson, T.S., K.S. Watrous, and S.K. Pelletier. Combining technologies to assess potential impacts to Mexican free-tailed bats in central Texas. Poster presentation at the NWCC Wind Wildlife Research Meeting VIII, Lakewood, Colorado, 2010.

Pelletier, S.K., G.C. Kendrick, T.S. Peterson, and A.J. Gravel. Atlantic Offshore Bird & Bat Pilot Study: 2009 Results. Poster Presentation at the AWEA Offshore Energy Conference, Atlantic City, New Jersey, 2010.

Pelletier, S.K., T.S. Peterson, and G.C. Kendrick. Understanding of the Current Knowledge of Offshore Wind and Wildlife Issues. Presented at the NWCC Wind Wildlife Research Meeting VIII; Lakewood, Colorado, 2010.

Giumarro, G.J., K.S. Watrous, T.S. Peterson, S.A. Boyden, M.J. Lacki, and J.S. Johnson. Seasonal and geographic trends in acoustic detection of tree-roosting bats. Presented at the Windpower Conference and Exhibition, Dallas, Texas, 2010.

Trevor S. Peterson

Project Manager, Senior Wildlife Biologist

Giumarro, G., T.S. Peterson, C.W. Meinke, and S.K. Pelletier. Understanding Risk to Long-distance Migratory Bats in Canada using an Ecological Risk Framework. Presented at the CanWEA Environmental Assessment Siting Workshop, Halifax, Nova Scotia, 2009.

Pelletier, S., G. Kendrick, G. Giumarro, T. Peterson, and A. Gravel. Gulf of Maine Offshore Bat and Bird Project. Poster Presentation at AWEA Offshore Energy Conference; Boston, Massachusetts, 2009.

Giumarro, G., J.S. Johnson, T.S. Peterson, K.S. Watrous, and S. Boyden. Summary of Seasonal Distribution of Migratory Tree Bats in the Northeastern United States Using Passive Acoustic Sampling. Presented at the 1st International Symposium on Bat Migration. Berlin, Germany, 2009.

Giumarro, G., S. Pelletier, K. Watrous, T. Peterson, and J. Johnson. Seasonal Distribution of Tree Bats in the Northeast Using Passive Acoustic Sampling. Poster Presentation at the Windpower Conference and Exhibition, Chicago, Illinois, 2009.

Pelletier, S.K., C.W. Meinke, T.S. Peterson, and A.J. Gravel. Radar and acoustic bat surveys in pre and post-construction bird and bat mortality monitoring. Poster Presentation at the AWEA Conference in Los Angeles, California, 2008.

Pelletier, S.K., A.J. Gravel, and T.S. Peterson. Nocturnal avian flight heights relative to risk of collision with wind turbines. Presented at the NWCC Wind Wildlife Research Meeting VII, Milwaukee, Wisconsin, 2008.

Meinke, C.W., T.S. Peterson, J.P. Lortie, and S.K. Pelletier. Assessing risk to bats from wind facilities using the weight-of-evidence approach to ecological risk assessment. Presentation at the joint meeting of the Northeast Bat Working Group and the Southeastern Bat Diversity Network. Blacksburg, Virginia, 2008.

Lortie, J.P., G. Giumarro, R.D. Roy, and T.S. Peterson. Using ecological risk assessment to characterize risk to birds and bats at wind farms. Presentation at the 14th Annual Conference of the Wildlife Society, Tucson, Arizona, 2007.

Peterson, T.S., A. Uesugi, and J. Lichter. Tree recruitment limitation by introduced snowshoe hares, *Lepus americanus*, on Kent Island, New Brunswick. Canadian Field Naturalist 119 (4). 569-572, 2005.

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF
VATSAL A. SHAH, P.E., PhD
SENIOR ASSOCIATE & SENIOR PROJECT ENGINEER
MOTT MACDONALD GROUP

1 **Q: Please state your name, employer, and business address.**

2 A: Vatsal A. Shah, P.E., PhD, Mott MacDonald Group (Mott MacDonald), 111 S. Wood Avenue, Iselin,
3 NJ 08830.

4 **Q: What is your position at Mott MacDonald?**

5 A: I am a Senior Associate and Senior Project Engineer at Mott MacDonald.

6 **Q: How long have you been employed by Mott MacDonald?**

7 A: I have been employed by Mott MacDonald since June 2008.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Science in civil engineering and a Master of Science and PhD in
10 civil/geotechnical engineering from the New Jersey Institute of Technology. I am a registered
11 Professional Engineer in eight states, including New York, and am a member of various professional
12 organizations, including the American Society of Civil Engineers and the Association of Engineering
13 Geologists. During the course of my career, I have provided geotechnical services on a wide variety
14 of projects, including linear construction projects (water, wastewater, natural gas, and product
15 pipelines), renewables (solar and wind), and heavy foundations, structures, retaining walls, slope
16 stability and other infrastructure improvements. My specialties include rock blasting evaluations,
17 ground-borne vibrations due to construction, and trenchless excavations. Before joining Mott
18 MacDonald, I was employed for three years at ANS Consultants, Inc., an engineering specialty
19 inspection and construction materials testing firm. My resume is attached.

20 **Q: Please describe your current responsibilities with Mott MacDonald.**

21 A: My responsibilities at Mott MacDonald center around soil and geological investigations and
22 geotechnical evaluations, including overseeing the provision of geotechnical services in the
23 Northeast and across the United States. In that role, I supervise a team that oversees soil boring and

rock coring activities, evaluates sample results, and provides geotechnical recommendations on numerous types of construction projects. In the area of renewable energy, I have served as the Geotechnical Engineer of Record or responsible engineer for various wind and solar energy projects, overseeing the subsurface investigation and preparation of geotechnical recommendations, including reviewing local geology, seismology and soils and conducting a field investigation program, including geotechnical borings, electrical and thermal resistivity soil sampling, and testing and evaluation of shallow rock characteristics. I have also provided geotechnical engineering services for numerous other projects, including natural gas pipelines, substations, an airport fueling facility, and a regional product distribution center, among others.

Q: Have you previously testified before the New York State Public Service Commission or Siting Board on Electric Generation?

A: No.

Q: Have you previously served as an expert witness before any other court, agency, or other body on the subject you plan to offer testimony on today?

A: No.

Q: What is the purpose and scope of your testimony in this proceeding?

A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

Q: What portion(s) of the Application is your testimony sponsoring?

A: Exhibit 21, Geology, Seismology and Soils.

Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction and supervision.

A: Yes.

46 **Q:** In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or
47 documents produced by persons other than yourself/your company? If so, please cite these
48 sources.

49 A: References, if any, are provided in the Exhibit and related report(s).

50 **Q:** Does this conclude your testimony?

51 A: Yes.

Vatsal A. Shah, PE, PhD

Personal summary

Education:

PhD, Civil/Geotechnical Engineering, New Jersey Institute of Technology, 2014

MS, Civil/Geo-environmental Engineering, New Jersey Institute of Technology, 2009

BS (hon.), Civil Engineering, New Jersey Institute of Technology, 2008

Registrations:

Professional Engineer

NJ #24GE04932300, 2011

NY #090390-1, 2012

PA #PE079626, 2012

LA #PE.0039090 (Civil), 2014

MO #2016040095, 2016

OH #PE.79171, 2014

TX #122931, 2016

MD #53021, 2018

Professional Planner, NJ

#33LI00634500, 2017

NJDEP UST License –

Closure/Installation/

Subsurface/Tank Testing

#630473

ACI Concrete Field Testing

Technician - Grade I, 2007

OSHA Hazardous Waste Site

Operations #130505181621,

2013

OSHA Construction Safety

and Health, 2016

Years with Mott MacDonald:

11

Years with other firms:

4

Professional memberships:

American Concrete Institute

American Society of Civil

Engineers

Association of Engineering

Geologists

National Society of

Professional Engineers

Pile Driving Contractors

Association

Dr. Shah's responsibilities center around soil and geological investigations, as well as geotechnical evaluations. He currently oversees and is responsible for geotechnical services in the Northeast, as well as across the United States. He and his team are based out of Mott MacDonald's Iselin headquarters office. He supervises a team which oversee soil boring and rock coring activities, cataloguing samples, evaluating laboratory test results, and providing geotechnical recommendations for a variety of public and private clients. Dr. Shah's experience extends to linear construction projects (water, wastewater, natural gas, and product pipelines), renewables (solar and wind), and heavy foundations, structures, retaining walls, slope stability, and other infrastructure improvements. Dr. Shah is specialized in rock blasting evaluations, ground-borne vibrations due to construction, and trenchless evaluations.

Dr. Shah has also been nationally recognized by Engineering News-Record (ENR) as one of the Top 20 under 40 for the New York Metropolitan Region, the American Society of Civil Engineers as the "Face of Civil Engineering" for 2013, and the Young Engineer of the Year by the New Jersey Society of Professional Engineers in 2012. He is also an Adjunct Professor at the New Jersey Institute of Technology and New York University, teaching undergraduate and graduate foundation design.

Selected projects

Deer River Wind Farm – Article 10 Geotechnical Evaluation, Avangrid Renewables, Jefferson and Lewis Counties, NY:

Geotechnical Engineer of Record responsible for overseeing a subsurface investigation and preparation of geotechnical recommendations for an approximately 100 MW wind farm in the towns of Pinckney and Harrisburg, Lewis County and Town of Rodney, Jefferson County, NY. The evaluation consisted of reviewing local geology, seismology, and soils, followed by a field investigation program including geotechnical borings, electrical and thermal resistivity soil sampling/testing, and evaluation of shallow rock characteristics at representative locations across the project area. Provided geotechnical recommendations related to the proposed wind farm development including foundation design, rock rippability, soil re-use, site grading, and earthwork/material re-use.

Coeymans Solar - Article 10 Geotechnical Evaluation, Hecate Energy, Coeymans, NY:

Geotechnical Engineer of Record responsible for overseeing a subsurface investigation and preparation of geotechnical recommendations for an approximately 40 MW solar development in the Town of Coeymans, Albany County, NY. The evaluation consisted of reviewing local geology, seismology, and soils, followed by a field investigation program including 10 geotechnical borings, electrical and thermal resistivity soil sampling/testing, and geophysical testing (MASW) at representative locations across the project area. Provided geotechnical recommendations related to foundation design, soil re-use, site grading, and earthwork/material re-use.

Greene County Solar Farm - Article 10 Geotechnical Evaluation, Hecate Energy, Cossackie, NY:

Geotechnical Engineer of Record responsible for overseeing a subsurface investigation and preparation of geotechnical recommendations for an approximately 50 MW solar development in the Town of Cossackie, Greene County, NY. The evaluation consisted of reviewing local geology, seismology, and soils, followed by a field investigation program including 13 geotechnical borings, electrical and thermal resistivity soil sampling/testing, and geophysical testing (MASW) at representative locations across the project area. Provided geotechnical recommendations related to foundation design, soil re-use, site grading, and earthwork/material re-use.

Mohawk Solar – Article 10 Geotechnical Evaluation, Avangrid Renewables, Marshville, NY:

Independent reviewer for a preliminary Geotechnical Evaluation for a 90 MW solar project in the reviewing a desktop evaluation of local geology and soils, as well as the results of a field investigation program which included geotechnical borings, electrical and thermal resistivity soil sampling/testing, and evaluation of shallow rock characteristics at representative locations across the project area. Reviewed and provided feedback on geotechnical recommendations related to the proposed wind farm development including foundation design, rock rippability, soil re-use, site grading, and earthwork/material re-use.

Panther Creek Wind Farm, E.On Energy, Big Spring, TX:

Geotechnical Engineer responsible for the oversight of 113 approximately two-feet deep auger bores at ½-mile intervals across 67 miles of existing access roads within the Panther Creek Wind Farm site in Big Spring, Texas to investigate the thickness of the roadways. This work was completed to aid E.ON in their effort to complete minor upgrades across the existing turbine locations within the Panther Creek Wind Farm site. Mott MacDonald completed the road base thickness evaluation and then supplied E.ON Energy a data report with the road base thickness and coordinates of each bored location, mapping of the investigation, and photo log with photos of each bored hole and existing access road. (2018)

PennEast Pipeline Project, UGI Energy Services, Pennsylvania and New Jersey

Geotechnical Engineering Lead for a new 120 mile, 36 inch diameter high pressure natural gas pipeline system traversing between Luzerne County, PA and Mercer County, NJ. Planned, coordinated, and implemented an investigation program to collect geotechnical data for up to 13 horizontal directional drill (HDD) crossings, 8 new meter and compressor stations locations, seismic evaluation of preferred pipeline route, and verification of geophysical test results indicating karst and possible sinkhole solution features. Several sensitive crossings, such as the Lehigh River and Delaware River, were evaluated to provide guidance to in-house HDD designers to complete layout, geometry, and review feasibility of the proposed crossings. Additional challenges included geotechnical evaluations across a seismic fault line, former closed and abandoned underground mines and pits, and sinkhole-prone (karst) regions which the preferred pipeline route crossed.

The project involves on-going coordination and communication with key stakeholders such as state and federal regulatory agencies (USEPA, PA DCNR, NJDEP), infrastructure agencies (PennDOT, NJDOT), existing public and private utility providers, and county and local government agencies to schedule and allow the completion of geologic test bores and surveys. An accelerated FERC submission filing schedule required the coordination and management of multiple geotechnical drilling crews and field staff within a shortened, three month period to allow incorporation into resource reports. As team leader, Dr. Shah managed a multi-million dollar geotechnical budget and a group of over 15 in-house engineers, geologists, and scientists. He additionally supervised multiple drill rig crews and subcontractor field staff to meet required critical project milestones (2015 – ongoing)

Proposed Wind Turbine Foundation, Bayonne Municipal Utilities Authority, Hudson County, NJ

Provided oversight for soil borings and rock coring, to depths of 100 feet, performed as a basis for the preliminary design of the foundation of a proposed wind turbine. Created field soil boring and rock coring logs, and catalogued soil samples taken during borings. Assisted in the selection of soil laboratory tests for engineering design purposes. Evaluated existing information on wind turbine sites to provide recommendation on avian mortality rates

Summit Substation, NJ Transit, Summit, NJ

Geotechnical engineer responsible in the planning, coordination, and oversight of a subsurface investigation program consisting of soil borings to support geotechnical recommendations for the installation of a new office unit. Field engineer responsible in logging and classifying soil and concurrently conducted environmental sampling during geotechnical borings to assess potential contamination concerns at the project site. Prepared geotechnical report with recommendations on potential foundation shallow foundation designs, allowable bearing capacities, settlement, and seismic concerns for the unit (2012)

Photovoltaic System Geotechnical Investigation and Structural Design, Cambria Solar, Lower Township MUA, Lower Township, NJ

Civil and geotechnical engineer responsible for planning and coordinating a geotechnical investigation to support a 965 kV photovoltaic generation system being constructed for the Lower Township Municipal Utilities Authority. Field engineer responsible in logging and classifying soil encountered during borings and selecting representative samples for laboratory classification to provide a recommendation on constructability. Performed engineering design to determine section, length, and embedment of H-piles to support the solar array racking system. Performed structural design to verify load due to racking system and to select appropriate steel members for the system. (2011)

Geotechnical Investigations, Natural Gas Compressor Station, Confidential Client, Minisink, NY: Geotechnical Engineer responsible for overseeing a subsurface investigation

program to collect geotechnical data through soil borings and rock coring to support geotechnical and constructability recommendations for a natural gas compressor station and support buildings. The investigations were spread across two potential project sites. The intent of the geotechnical investigation was to recommend and select the preferable site. The compressor station building included two 6,130-HP centrifugal compressors as well as cooling tower stacks. Field engineer responsible for logging and classifying soil and rock encountered during borings, and selecting representative samples for laboratory classification to supplement design. Conducted soil resistivity surveys at both sites to determine the need for additional protection systems. Provided a geotechnical report with recommendations on siting, potential foundation designs, allowable bearing capacities, beneficial re-use of materials, and settlement with regard to the compressor station and accessory structures.

Subsurface Investigation, Newark Liberty International Airport Terminal A Fueling Upgrades, Port Authority of NY/NJ, Newark, NJ: Geotechnical Engineer responsible for providing recommendations for footings for two new 2 MG jet fuel tanks, new fuel selection area, and fuel stationing structure. Recommendations involved cost and constructability comparison of consolidation and differential settlement along tank radius for shallow foundations with and without the use of wick drains, and the potential for deep foundations and associated settlement.

Fishkill Correctional Facility, NY Office of General Services (NYCOGS), Beacon, NY: Project Manager responsible for the program-phase design of a 15,000 square-foot regional distribution center and storage warehouse for Corcraft products, as well as above-ground fueling facilities and parking space to accommodate the storage of 35 trailers and up to 10 non-idling trailer parking spots. Provided site-civil support including evaluation of stormwater management facilities, environmental considerations and permits for material handling and off-site disposal, and parking and vehicle circulation analyses. Interfaced with internal electrical and mechanical teams for the evaluation of lighting and integration of HVAC, plumbing, and fire alarm and communication systems into the existing correctional facility grid. As Project Geotechnical Engineer, oversaw the completion of a geotechnical and environmental due diligence investigation to support foundation recommendations. (2015)

Geotechnical Investigations, Natural Gas Compressor Station, Confidential Client, Hancock, NY: Geotechnical Engineer responsible for overseeing a subsurface investigation program to collect geotechnical data through 16 soil borings and rock corings to support geotechnical and constructability recommendations for a natural gas compressor station, blow down structure, and maintenance buildings. The compressor station building included two 6,130-hp centrifugal compressors, cooling tower stacks, and an auxiliary building. Oversaw field engineers responsible for logging and classifying soil and rock and creating a laboratory testing program. Provided a geotechnical report with recommendations for socketed caisson foundations, allowable bearing capacities and anticipated settlement, rock cut and retaining wall design, and beneficial re-use of materials for backfilling of the site. (2012 – present)

Natural Gas Pipeline Routing Study, Confidential Client, Various Counties, NJ/NY: Assisted in the development of a Regional Routing Study consisting of evaluating approximately 1,500 square miles for viable utility routes throughout the region. Aided in developing Health and Safety and Project Execution plans for field reconnaissance activities. Assisted in the evaluation of ranking alternatives for a preferred corridor during desktop studies, field reconnaissance, and ground truthing events. Performed field investigations to verify attributes. Assisted in the evaluation of potentially critical environmental issues relating to the routing corridors. (2008 – 2010)

STATE OF NEW YORK
BOARD ON ELECTRIC GENERATION SITING

Application of Deer River Wind Farm for
a Certificate under Article 10 of the Public Service Law

Case No. 16-F-0267

PRE-FILED TESTIMONY OF:

WALTER MEISNER

SENIOR BUSINESS DEVELOPER

AVANGRID RENEWABLES

1 **Q: Please state your name, employer, and business address.**

2 A: Walter Meisner, Avangrid Renewables (Avangrid), Two Radnor Corporate Center, Suite 200, 100
3 Matsonford Road, Radnor, PA 19087.

4 **Q: What is your position at Avangrid?**

5 A: I am a Senior Project Developer at Avangrid.

6 **Q: How long have you been employed by Avangrid?**

7 A: I have been employed by Avangrid Renewables and its predecessor, Iberdrola, for 9 years.

8 **Q: Please describe your educational background and professional experience.**

9 A: I received a Bachelor of Science in Civil Engineering from the State University of New York at Buffalo.
10 I began my career with Sear Brown Associates in Buffalo, New York, where I produced civil and
11 engineering designs in support of site development projects and prepared roadway and traffic
12 designs and analyses. I then joined Benchmark Environmental Engineering & Science, where I
13 oversaw site remediation projects and designed landfills, among other responsibilities. After joining
14 Iberdrola, the predecessor to Avangrid, my focus shifted to the development of renewable energy
15 projects, specifically utility-scale wind energy projects.

16 **Q: Please describe your current responsibilities with Avangrid Renewables.**

17 A: As a Senior Business Developer at Avangrid, I am responsible for overseeing the development of
18 utility-scale wind energy projects from initial conception through construction. In that capacity, I
19 manage the in-house team assigned to each project and coordinate with the technical experts
20 responsible for designing, developing, permitting and constructing the project. I am also involved in
21 outreach to the host communities, including negotiating the terms of key agreements required to
22 construct wind energy projects, such as payment in lieu of taxes agreements, host community
23 agreements, road use agreements, and cultural mitigation projects. To date, I have been responsible

24 for managing projects in California, Massachusetts, New York, North Carolina, Texas and Vermont
25 that range in size from 28.5 MW to 208 MW.

26 **Q: Have you previously testified before the New York State Public Service Commission or Siting**
27 **Board on Electric Generation?**

28 A: No.

29 **Q: Have you previously served as an expert witness before any other court, agency, or other**
30 **body on the subject you plan to offer testimony on today?**

31 A: No.

32 **Q: What is the purpose and scope of your testimony in this proceeding?**

33 A: To sponsor certain portions of the Deer River Wind Farm Application or the Exhibits thereto.

34 **Q: What portion(s) of the Application is your testimony sponsoring?**

35 A: Exhibit 1, General Information; Exhibit 2, Overview and Public Involvement; Exhibit 3, Location of
36 Facilities; Exhibit 6, Wind Power Facilities; Exhibit 12, Construction; Exhibit 13, Real Property;
37 Exhibit 14, Cost of Facilities; Exhibit 15, Public Health and Safety (except shadow flicker and
38 noise/infrasound); Exhibit 18, Safety and Security; Exhibit 23, Water Resources and Ecology
39 (water well survey only); Exhibit 25, Transportation (aviation only); Exhibit 26, Effect on
40 Communication (aviation only); Exhibit 38, Water Interconnection; Exhibit 39, Wastewater
41 Interconnection; Exhibit 40, Telecommunications Interconnection.

42 **Q: Were these Exhibits, Application sections, or studies prepared by you or under your direction**
43 **and supervision.**

44 A: Yes.

45 **Q: In your testimony, will you refer to, or otherwise rely upon, any studies, publications, data or**
46 **documents produced by persons other than yourself/your company? If so, please cite these**
47 **sources. [These are independent studies, etc.]**

48 A: References, if any, are provided in the Exhibits identified above.

49 **Q: Does this conclude your testimony?**

50 A: Yes.

WALTER MEISNER

Sr. Business Developer
Avangrid Renewables

Over his 18-year professional career, Walter Meisner has engaged in a broad range of industries and projects in various capacities from engineering and field construction oversight to business development. He began his career at Sear Brown Associates, located in Buffalo, New York, where he produced civil and environmental engineering designs, supported national commercial site development efforts, and completed various roadway and traffic designs and analyses. Continuing his career with Benchmark Environmental Engineering & Science, PLLC, in Buffalo, New York, Walter introduced and employed unique and state-of-the-art environmental remediation technologies, engaging as the resident engineer for one of the largest brownfield clean-up projects in New York at the time (including active hazardous materials excavation and treatment, on-site material containment, and groundwater collection and water treatment design, installation and operation, air monitoring during construction). He also designed several RCRA landfill facilities and gained expertise across a broad spectrum of applied sciences. In the last 10 years, Walter has focused his career on the development of renewable energy projects, primarily at Avangrid and its direct predecessor, Iberdrola. At Avangrid, he manages teams and technical experts responsible for designing, developing, permitting, and constructing renewable energy projects nationwide, while also engaging in community and local conversations to support renewable energy development.

EDUCATION

Bachelor of Science, Civil Engineering, State University of New York at Buffalo (SUNY) Buffalo, New York, 2000

PROJECT EXPERIENCE

Deer River Wind Project *Serving as Project Developer and Lead Project Sponsor for a proposed commercial-scale wind project of approximately 100 +/- MW, including installation of wind turbines, electrical collection, access roads, interconnection, and other facilities. Working with landowners and project stakeholders, Walter currently oversees development of the project including preparation of the Article 10 application for a Certificate of Environmental Compatibility and Public Need under the Public Service Law (PSL). Additionally, he is working with local host communities towards agreements on project payments in lieu of taxes (PILOT), road use agreements (RUA), cultural mitigation projects, and other local benefits.*

Roaring Brook Wind Project *Serving as the Project Developer and lead project sponsor for a proposed commercial-scale wind project of approximately 79 +/- MW, including installation of wind turbines, electrical collection, access roads, interconnection, and other facilities. Overseeing all aspects of project development to advance project to construction.*

Deerfield Wind Project, VT *Served in multiple capacities as the Project Developer and engineering manager through project development, obtaining construction and operational storm water permits through the State of Vermont, as well as supporting local and federal permitting efforts. The Project was constructed as a 30 MW project, primarily on United States Forest Service property.*

Thule Wind Project, CA *Served as the Engineering Manager supporting permitting and project development to obtain full design and construction and operational permits from the San Diego County Bureau of Land Management and other local and State permitting agencies. The Project was constructed as a 168 MW wind facility over 12,000 acres of public land, including 62 turbines, 34.5 kV overhead and underground collection, 138 kV transmission line, and operations facilities and access roads.*

Desert Wind Project, NC *Served as the Engineering Manager supporting permitting and project development to permit, construct and operate a 208 MW wind generating facility in Perquimans and Pasquotank Counties, North Carolina. The project was the first utility scale wind farm in the state of North Carolina and was placed in operation in December 2016.*

Baffin Wind Project, TX *Served as the Engineering Manager supporting permitting and project development to permit, construct and operate a 202 MW wind generating facility in Sarita, Texas. Walter was responsible for overseeing all technical design and provided technical construction oversight. The project was completed and brought into operation the fall of 2014.*

Hoosac Wind Project, MA *Served as the Engineering Manager supporting permitting and project development. The 28.5 MW project is the largest utility scale wind generating facility to date in Massachusetts. Walter provided oversight of development and construction, serving as the owner's representative to ensure contractor permit compliance during construction, as well as providing onsite oversight of project construction.*

Steel Winds Wind Project, Lackawanna, NY Served
as the Civil Engineering Project Designer for design of
project infrastructure and environmental remediation
required under the New York State Brownfield's Cleanup
Program for a commercial-scale wind power project
located along Lake Erie in New York.

Attachment '2'

Case 16-F-0559 - Application of Bluestone Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to
Article 10 to Construct a 124 MW Wind Energy Project in the Towns of Sanford and Windsor, Broome County, New York

Recipient	Full Paper Copies	Abridged Paper Copies	CD of Full Application	Certain Appendices - Paper	Other
Hon. Kathleen H. Burgess Secretary to the Commission New York State Public Service Commission Empire State Plaza Agency Building 3 Albany, NY 12223-1350	10	0	0	0	
Basil Seggos, Commissioner NYS Department of Environmental Conservation 625 Broadway Albany, NY 12233	3	0	2	0	
Randy Young, Acting Regional Director NYS Department of Environmental Conservation Region 6 317 Washington St. Watertown, NY 13601	2	0	2	0	
Daniel P. O'Connell Administrative Law Judge Office of Hearings and Mediation Services New York State Department of Environmental Conservation 625 Broadway, First Floor Albany, NY 12233-1550	1	0	0	0	
Honorable James Costello Administrative Law Judge State of New York Department of Public Service Three Empire State Plaza Albany, New York 12223-1350	1	0	0	0	
Howard A. Zucker, Commissioner NYS Department of Health ATTN: Henry Spliethoff Corning Tower Room 1743 Empire State Plaza Albany, NY 12237	0	1	1	0	

Case 16-F-0559 - Application of Bluestone Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to
Article 10 to Construct a 124 MW Wind Energy Project in the Towns of Sanford and Windsor, Broome County, New York

Richard Kauffman, Chairman NYSERDA ATTN: Kelly Tyler, Director of Communities and Local Government 17 Columbia Circle Albany, NY 12203	0	0	1	0	
Howard Zemsky, Commissioner NYS Department of Economic Development ATTN: Vincent Ravaschiere Senior Vice President, Energy and Incentives Empire State Development 633 Third Avenue, 36th Floor New York, NY 10017	0	1	1	0	
Sherry Harmych, Town Supervisor 587 County Route 194 Copenhagen, NY 13626	0	0	1	0	
Stephen Bernat, Town Supervisor 3620 O’Brien Road Lowville, NY 13367	1	0	0	0	
Gary Stinson, Town Supervisor PO Box 523 Rodman, NY 13682	1	0	0	0	1 Flash Drive
Ryan Piche, Lewis County Executive Lewis County Courthouse Lowville, NY 13367	1	0	0	0	

Case 16-F-0559 - Application of Bluestone Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to
Article 10 to Construct a 124 MW Wind Energy Project in the Towns of Sanford and Windsor, Broome County, New York

NYS Department of Agriculture and Markets ATTN: Kathleen Tylutki 10B Airline Drive Albany, NY 12235	0	0	1	0	Hard copy Figure 2-2: Facility Layout; 1 Flash Drive; and KMZ File
Robert F. Hagemann, III Jefferson County Administrator 175 Arsenal Street Watertown, NY 13601	0	1	1	0	
Michael J. Saviola, MPS NYS Department of Agriculture & Markets Division of Land & Water Resources 1530 Jefferson Road Rochester, NY 14623	0	0	1	0	Hard copy Figure 2-2: Facility Layout; THUMB DRIVE; and KMZ File
NYS Department of State ATTN: Erin Hogan Director, Utility Intervention Unit One Commerce Plaza 99 Washington Avenue Suite 640 Albany, NY 12231	0	0	1	0	

Case 16-F-0559 - Application of Bluestone Winds LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to
Article 10 to Construct a 124 MW Wind Energy Project in the Towns of Sanford and Windsor, Broome County, New York

Letitia James Office of the Attorney General The Capitol Albany, NY 12224-0341	0	0	1	0	
Paul A. Karas, Acting Commissioner NYS Department of Transportation 50 Wolf Road Albany, NY 12232	0	0	0	0	1 Flash Drive
Rose Harvey, Commissioner NYS Office of Parks, Recreation, and Historic Preservation ATTN: Diana Carter 625 Broadway Albany, NY 12207	0	0	1	0	
NYS Office of Parks, Recreation, and Historic Preservation ATTN: John Bonafide Director, Technical Preservation Services Bureau Division for Historic Preservation Peebles Island State Park 1 Delaware Avenue North Cohoes, NY 12047	0	0	1	0	
Pinckney Town Hall 587 County Route 194 Copenhagen, NY 13626	1	0	0	0	
Lowville Free Library 5387 Dayan Street Lowville, NY 13367	1	0	0	0	
Rodman Public Library 12509 School Street Rodman, NY 13682	1	0	0	0	
New York State Department of Public Service James Denn, Public Information Coordinator 3 Empire State Plaza Albany, NY 12223	0	0	0	0	1 Electronic Copy

Attachment '3'

JOURNAL & REPUBLICAN

PINCKNEY HUGO GROUP A/P
AVANGRID
760 W GENESEE St
SYRACUSE NY 13204

REFERENCE: 114901 007332
2111027 AVANGRID

Darlene Sheitz, of the city of Watertown, County of Jefferson, being duly sworn, deposeth and saith that she is the Bookkeeping Supervisor for the Johnson Newspaper Corp., a corporation duly organized and existing under the laws of the State of New York, and having its principal place of business in th City of Watertown, New York, and that said corporation is the publisher of the Journal and Republican, a newspaper published in the Village of Lowville, County of Lewis, State of New York, and that the advertising described below was published in said newspaper.

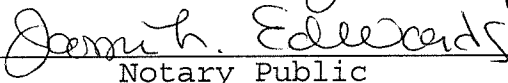

Darlene Sheitz, Bookkeeping Supervisor

PUBLISHED ON: 01/02

TOTAL COST: 867.15 AD SPACE: 123.000 INCH
FILED ON: 01/07/19

Sworn to before me this

7th day of January, 2019


Notary Public

JAMI L EDWARDS
NOTARY PUBLIC-STATE OF NEW YORK
No. 01ED6283808
Qualified in Jefferson County
My Commission Expires 06-17-2021

Deer River Wind Farm Project | Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

Atlantic Wind, LLC (Applicant) is proposing to construct a major electric generating facility under Article 10 of the New York Public Service Law (Facility). This notice announces that on or about Friday, January 18, 2019, the Applicant will file an Application pursuant to 16 NYCRR 1000.6 seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (Siting Board) authorizing the construction and operation of the Facility.

The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

The Facility is a zero-emission wind energy facility that will assist the State in meeting the goals of the State Energy Plan, which include obtaining 50% of energy generation from renewable sources by 2030 and significantly reducing greenhouse gas emissions. Other positive impacts of the Facility include diversification of energy supplies, new employment opportunities (both temporary construction employment and full-time jobs), and increased revenues to County and local tax bases, payments to the local hospitality industry, and purchase of local supplies and goods. In addition, the Applicant has attempted to minimize impacts to land associated with the Facility by limiting the disturbance to forested lands and wetlands to the maximum extent practicable. However, the construction and operation of the Facility may result in some environmental impacts as more fully described in the Application, including, but not limited to: impacts on terrestrial ecology, including avian and bat species; minor impacts to forested land, wetlands and agricultural lands; and impacts to people, including noise, traffic and visual impacts.

Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application. The Applicant also intends to submit a request for a Water Quality Certification (WQC) under Section 401 of the federal Clean Water Act.

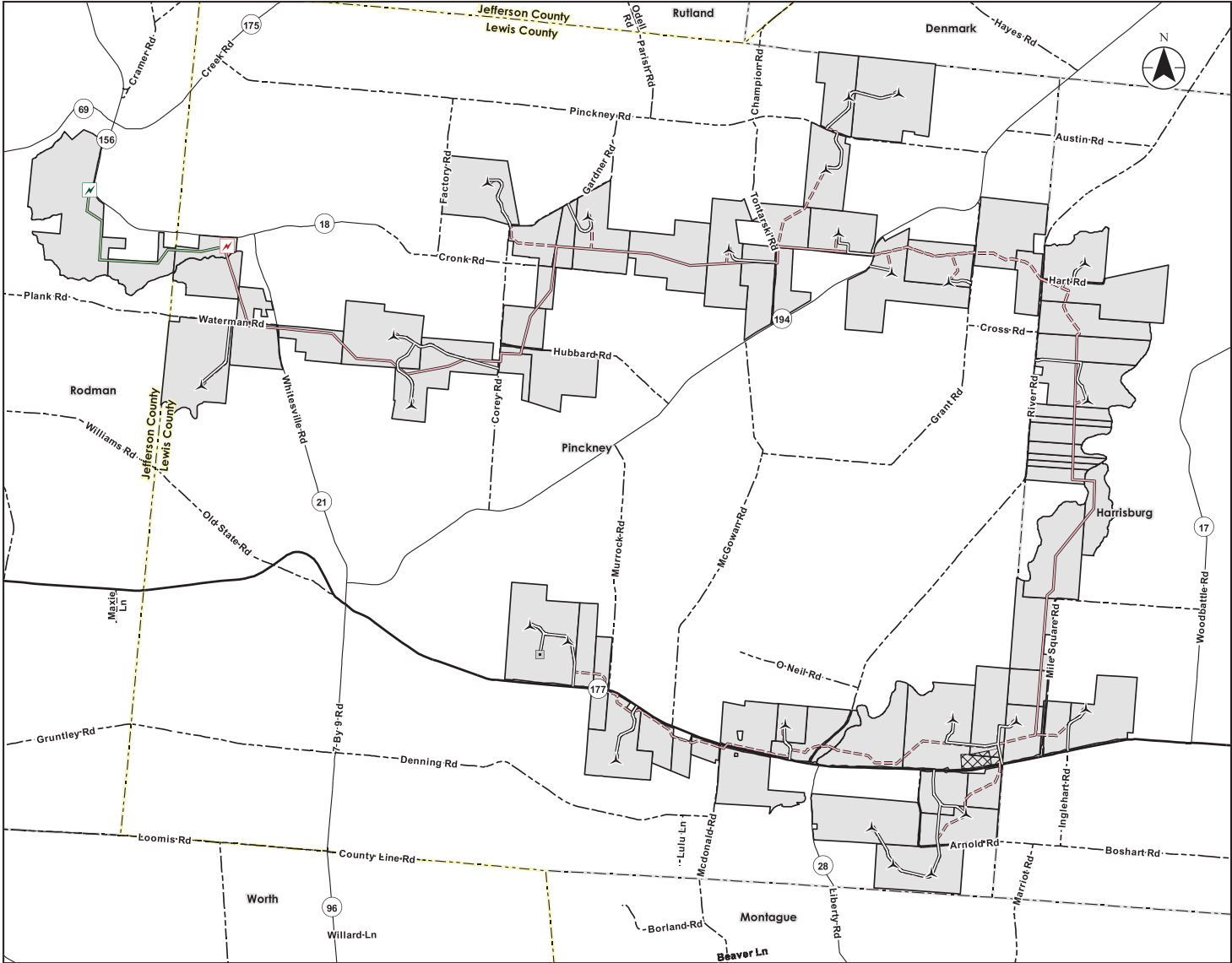
The Article 10 regulations outlining the required contents of the Application can be found at 16 NYCRR 1001.1 *et seq.* The Application includes, among other things: an analysis of the environmental setting of the Facility, a description of the Facility, including preliminary design drawings and related information; copies of reports, studies and plans submitted in support of the Application; and an assessment of impacts of construction and/or operation of the Facility relating to land use; consistency with State energy planning objectives, including climate change and renewable energy goals; public health and safety; terrestrial ecology, water resources and aquatic ecology, including avian and bat species and wetlands; communications, transportation and utilities; cultural, historical and recreational resources; visual, including shadow flicker; sound; electric magnetic fields; and impacts on the statewide electrical system.

Pursuant to the Article 10 process, this notice is being provided in accordance with 16 NYCRR 1000.7, and will be published at least three days prior to the filing of the Application. In addition, a copy of the Application will be served on the Chief Executive Officer of each municipality in which any portion of the Facility is located, as well as those persons and agencies enumerated in 16 NYCRR 1000.6.

Once an Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. The Siting Board will also issue a notice of availability of application intervenor funds that are available to be used by parties to participate in formal review of the Application. A pre-hearing conference will be scheduled by the Hearing Examiner to identify intervenors, award intervenor funds, identify issues for the hearing, and establish a case schedule. Additional hearings regarding the application and project impact assessments will be scheduled by the Hearing Examiner as needed. After hearings, the stakeholders may brief their positions and the Hearing Examiner will issue a recommended decision upon which the Siting Board will base its decision. Article 10 requires that all proceedings on the Application, including a final decision by the Siting Board, must be completed within 12 months of when the Application is determined to be complete.

Upon filing the Application, the Applicant will provide funding in the amount of \$101,400 to be disbursed by the Siting Board to municipalities and other local parties to help pay expenses, including attorneys and consultants, associated with participating in the Article 10 process during the application review phase. Fifty percent (50%) of these intervenor funds are reserved for municipalities. Following the filing of an Application, the Hearing Examiner or the Secretary will issue a notice of availability of application intervenor funds that provides a schedule and related information describing how interested members of the public may apply for application funds. Requests for application funds must be submitted to the Hearing Examiner within thirty (30) days after the issuance of the notice of the availability of application intervenor funds. Following the submittal of any intervenor funding requests, the Hearing Examiner may schedule a pre-hearing conference to consider fund requests.

The record of this proceeding, including the Application, may be examined during normal business hours at the Offices of the New York State Department of Public Service (DPS) at 3 Empire State Plaza, Albany, NY 12223; Atlantic Wind's Local Project Office in Lowville (7650 North State Street, Suite 1); and at the following public repositories: Pinckney Town Hall, 587 County Route 194, Copenhagen, NY 13626; Lowville Free Library, 5387 Dayan Street, Lowville, NY 13367; Rodman Public Library, 12509 School Street, Rodman, NY 13682. Libraries often have free internet access.



Legend

- Turbine Location
- State Route
- Town Boundary

Contact Information:

Atlantic Wind, LLC
Walter Meisner
Avangrid Renewables LLC
7650 North State Street, Suite 1
Lowville, NY 13367
Phone: 315-874-4231 or
1-844-308-4616 (toll free)
Email: DeerRiverWind@avangrid.com

**Contact for DPS
Article 10 Coordinator:**

James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Phone: 518-474-7080
Email: james.denn@dps.ny.gov

The Application will also be available at the DPS website at (<http://www.dps.ny.gov/>). To access documents, go to "Search" on the top of the webpage and search using the Case Number 16-F-0267 or the direct link <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-F-0267&submit=Search> or by going to the Project-specific website maintained by the Applicant:<https://www.avangridrenewables.com/deerriver>

FILE A REQUEST FOR NOTICES:

Any interested member of the public may file a request with the DPS Secretary to receive copies of all notices concerning the Project. Written requests should be sent to the DPS Secretary at secretary@dps.ny.gov or sent by mail to the following address:

Hon. Kathleen H. Burgess
Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza | Agency Building 3
Albany, NY 12223-1350



AFFIDAVIT OF PUBLICATION

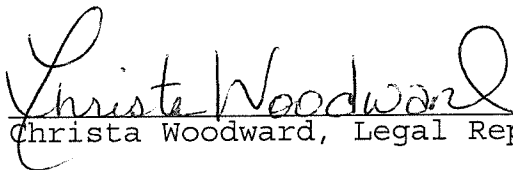
STATE OF NEW YORK
COUNTY OF JEFFERSON

WATERTOWN DAILY TIMES

PINCKNEY HUGO GROUP A/P
AVANGRID
760 W GENESEE St
SYRACUSE NY 13204

REFERENCE: 114901 007333
2111026 AVANGRID

Christa Woodward, Village of Carthage, Jefferson County, New York, being duly sworn, says that she is the Bookkeeping Supervisor for Johnson Newspaper Corp., a corporation duly organized and existing under the laws of the State of New York, and having its principle place of business in the City of Watertown, New York, and that said corporation is the publisher of the WATERTOWN DAILY TIMES, a newspaper published in the City of Watertown, County of Jefferson, and State of New York, and that advertising of which an annexed is a printed copy, has been published in the said Newspaper.

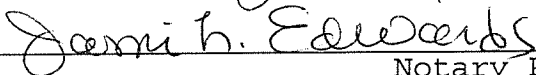

Christa Woodward, Legal Representative

PUBLISHED ON: 12/30 01/02

TOTAL COST: 3,843.75 AD SPACE: 123.000 INCH
FILED ON: 01/07/19

Sworn to before me this

7th day of January, 2019



Notary Public

JAMI L EDWARDS

NOTARY PUBLIC-STATE OF NEW YORK

No. 01ED6283808

Qualified in Jefferson County

My Commission Expires 06-17-2021

Deer River Wind Farm Project | Lewis and Jefferson Counties, New York

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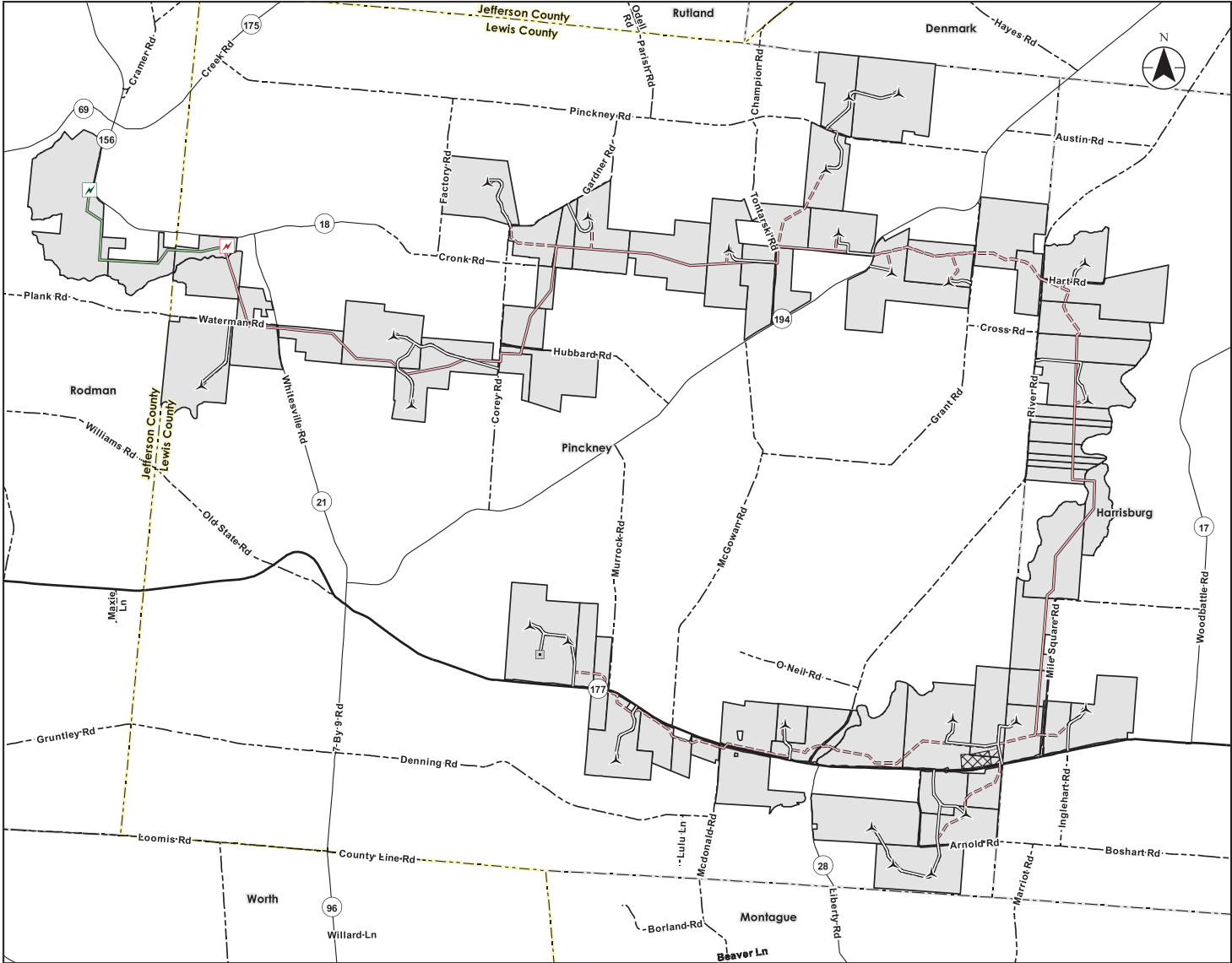
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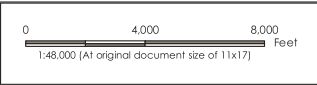
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Legend

- Turbine Location
- State Route
- Town Boundary



Contact Information:
Atlantic Wind, LLC
Walter Meisner
Avangrid Renewables LLC
7650 North State Street, Suite 1
Lowville, NY 13367
Phone: 315-874-4231 or
1-844-308-4616 (toll free)
Email: DeerRiverWind@avangrid.com

**Contact for DPS
Article 10 Coordinator:**
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Phone: 518-474-7080
Email: james.denn@dps.ny.gov

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Hon. Kathleen H. Burgess
Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza | Agency Building 3
Albany, NY 12223-1350



Deer River Wind Farm Project | Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

Atlantic Wind, LLC (Applicant) is proposing to construct a major electric generating facility under Article 10 of the New York Public Service Law (Facility). This notice announces that on or about Friday, January 18, 2019, the Applicant will file an Application pursuant to 16 NYCRR 1000.6 seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (Siting Board) authorizing the construction and operation of the Facility.

The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

The Facility is a zero-emission wind energy facility that will assist the State in meeting the goals of the State Energy Plan, which include obtaining 50% of energy generation from renewable sources by 2030 and significantly reducing greenhouse gas emissions. Other positive impacts of the Facility include diversification of energy supplies, new employment opportunities (both temporary construction employment and full-time jobs), and increased revenues to County and local tax bases, payments to the local hospitality industry, and purchase of local supplies and goods. In addition, the Applicant has attempted to minimize impacts to land associated with the Facility by limiting the disturbance to forested lands and wetlands to the maximum extent practicable. However, the construction and operation of the Facility may result in some environmental impacts as more fully described in the Application, including, but not limited to: impacts on terrestrial ecology, including avian and bat species; minor impacts to forested land, wetlands and agricultural lands; and impacts to people, including noise, traffic and visual impacts.

Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application. The Applicant also intends to submit a request for a Water Quality Certification (WQC) under Section 401 of the federal Clean Water Act.

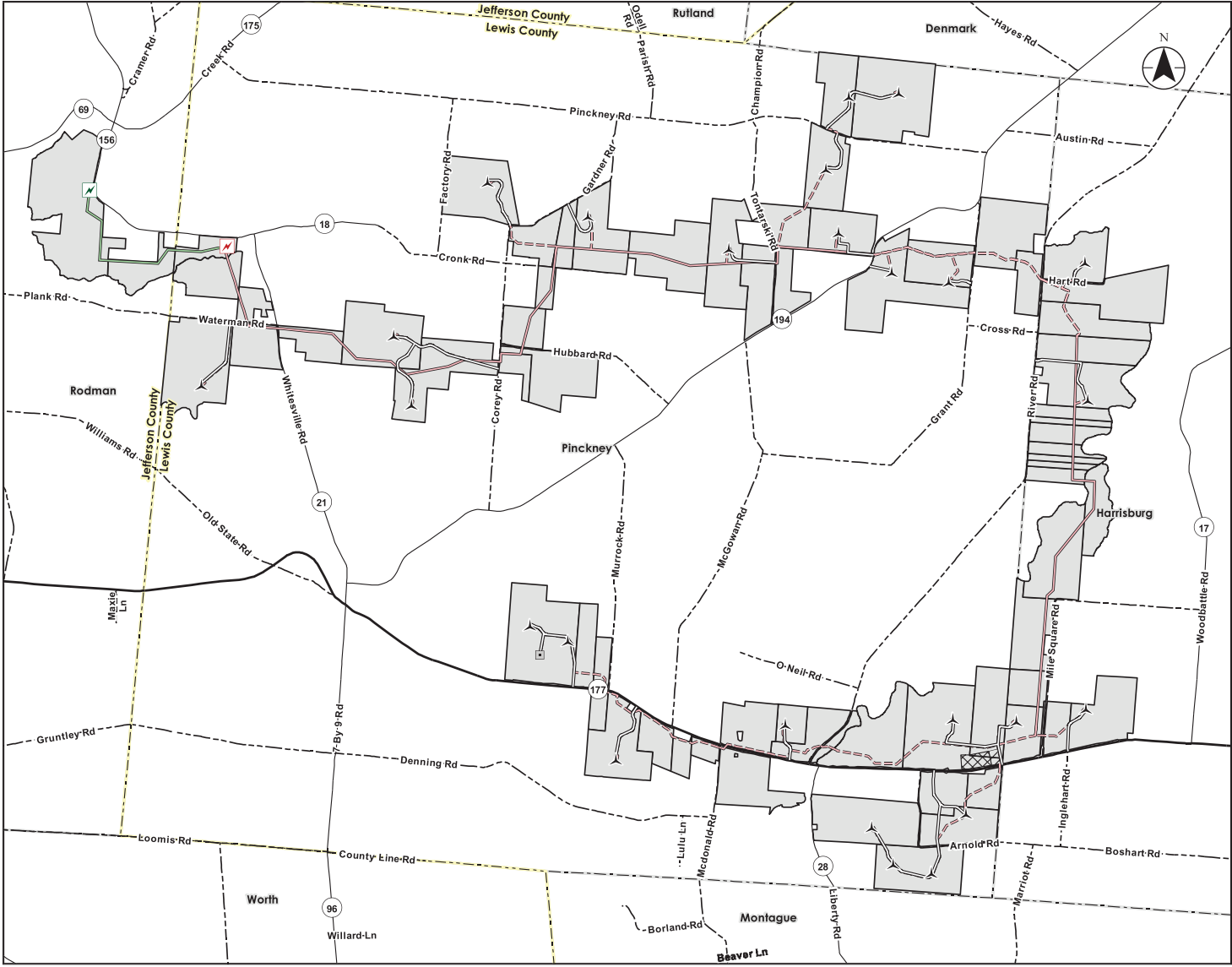
The Article 10 regulations outlining the required contents of the Application can be found at 16 NYCRR 1001.1 *et seq.* The Application includes, among other things: an analysis of the environmental setting of the Facility, a description of the Facility, including preliminary design drawings and related information; copies of reports, studies and plans submitted in support of the Application; and an assessment of impacts of construction and/or operation of the Facility relating to land use; consistency with State energy planning objectives, including climate change and renewable energy goals; public health and safety; terrestrial ecology, water resources and aquatic ecology, including avian and bat species and wetlands; communications, transportation and utilities; cultural, historical and recreational resources; visual, including shadow flicker; sound; electric magnetic fields; and impacts on the statewide electrical system.

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Legend

- Turbine Location
- State Route
- Town Boundary

0 4,000 8,000 Feet
1:48,000 (At original document size of 11x17)

Contact Information:
Atlantic Wind, LLC
Walter Meisner
Avangrid Renewables LLC
7650 North State Street, Suite 1
Lowville, NY 13367
Phone: 315-874-4231 or
1-844-308-4616 (toll free)
Email: DeerRiverWind@avangrid.com

**Contact for DPS
Article 10 Coordinator:**
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Phone: 518-474-7080
Email: james.denn@dps.ny.gov

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Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza | Agency Building 3
Albany, NY 12223-1350



Attachment '4'

NEW YORK STATE PUBLIC SERVICE COMMISSION

Application of Atlantic Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the Public Service Law for the Deer River Wind Farm Project in the Towns of Pinckney and Harrisburg in Lewis County, with electronical transmission interconnection proposed in the Town of Rodman in Jefferson County.

AFFIDAVIT OF SERVICE

Case No. 16-F-0267

STATE OF NEW YORK)
COUNTY OF ALBANY) ss.:

ALLYSSA T. MOODY, being duly sworn, deposes and says that on the 11th day of January, in the year 2019, she served a copy of Atlantic Wind's Notice of Submission of Application for the Deer River Wind Farm, upon the following parties at the following addresses:

NYS Assemblyman William Barclay
NYS Assembly District: 120
Albany Office
Capitol 444
Albany, NY 12248

NYS Senator Patricia Ritchie
NYS Senate District: 48
Albany Office
Legislative Office Building, Room 412
Albany, NY 12247

NYS Assemblyman Ken Blankenbush
NYS Assembly District: 117
Albany Office
Legislative Office Building, Room 322
Albany, NY 12247

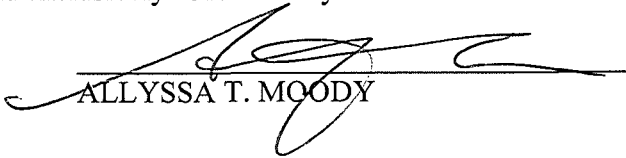
Stephen Bernat, Town Supervisor
Town of Montague
3620 O'Brien Rd
Lowville, NY 13367

NYS Senator Joseph Griffo
NYS Senate District: 47
172 State Street, Capitol Building
Room 413C
Albany, NY 12247

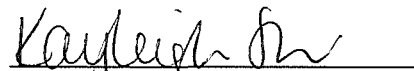
Sherry Harmych, Town Supervisor
Town of Pinckney
587 County Route 194
Copenhagen, NY 13626

Gary Stinson, Town Supervisor
Town of Rodman
12509 School Street
Rodman, NY 13682

via first class mail, by depositing a true and correct copy of same properly enclosed in a post-paid wrapper in the Official Depository maintained and exclusively controlled by the United States Postal Service at Albany, New York.

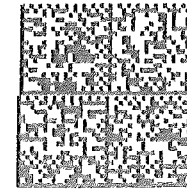

ALLYSSA T. MOODY

Sworn to me before me
this 11th day of January, 2019


Notary Public

KAYLEIGH J. ROBINSON
Notary Public, State of New York
No. 01CR6166964
Qualified in Schoharie County
Commission Expires May 29, 2019

YOUNG/SOMMER LLC
EXECUTIVE WOODS
5 PALISADES DRIVE, SUITE 300
ALBANY, NY 12205

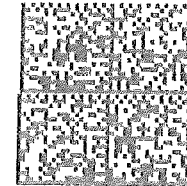


US POSTAGE
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First-Class

Mailed From 12205
01/11/2019
032A 0061852467

NYS Assemblyman William Barclay
NYS Assembly District: 120
Albany Office
Capitol 444
Albany, NY 12248

YOUNG/SOMMER LLC
EXECUTIVE WOODS
5 PALISADES DRIVE, SUITE 300
ALBANY, NY 12205

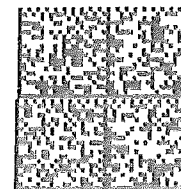


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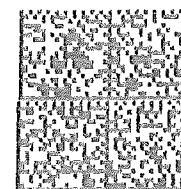
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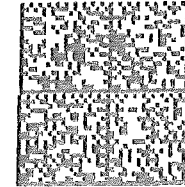
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NYS Senate District: 48, Albany Office
188 State Street, Legislative Office Bldg.
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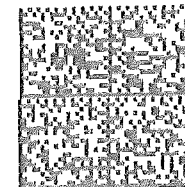
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Town of Montague
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Lowville, NY 13367

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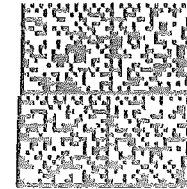
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Town of Pinckney
587 County Route 194
Copenhagen, NY 13626

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Young / Sommer LLC

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J. MICHAEL NAUGHTON
ROBERT A. PANASCI
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DEAN S. SOMMER
KEVIN M. YOUNG

LAURA K. BOMYEA
E. HYDE CLARKE
JESSICA ANSERT KLAMI
KRISTINA M. MAGNE

COUNSELORS AT LAW

EXECUTIVE WOODS, FIVE PALISADES DRIVE, ALBANY, NY 12205

Phone: 518-438-9907 • Fax: 518-438-9914

www.youngsommer.com

SENIOR COUNSEL

KENNETH S. RITZENBERG
DOUGLAS H. WARD (1947-2018)

OF COUNSEL

SUE H.R. ADLER
ROGER FLORIO
LAUREN L. HUNT
ELIZABETH M. MORSS
SCOTT P. OLSON
RICHARD E. OSTROV
KRISTIN LAVIOLETTE PRATT
STEPHEN C. PRUDENTE
KRISTIN CARTER ROWE
STEVEN D. WILSON

PARALEGALS

ALLYSSA T. MOODY, RP
AMY S. YOUNG

Writer's Telephone: 249
lbomyea@youngsommer.com

January 11, 2019

VIA FIRST-CLASS MAIL

NYS Assemblyman William Barclay
NYS Assembly District: 120
Albany Office
Capitol 444
Albany, NY 12248

***Re: Notice of Atlantic Wind LLC's Application for the Deer River Wind Farm
Case No. 16-F-0267***

Dear Assemblyman Barclay:

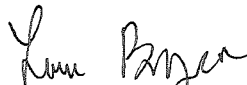
As you may be aware, Atlantic Wind LLC (Applicant), a subsidiary of Avangrid Renewables, LLC (AR), proposes to construct a major electric generating facility in the Towns of Pinckney and Harrisburg in Lewis County, New York, which would interconnect to the electric grid in the Town of Rodman, Jefferson County. To construct the facility, the Applicant is seeking a Certificate of Environmental Compatibility and Public Need ("CECPN") from the New York State Board on Electric Generating Siting and the Environment ("Siting Board") pursuant to Article 10 of the Public Service Law and the Siting Board's rules (16 NYCRR Part 1000). In accordance with the requirements of 16 NYCRR 1000.7 (b)(2), enclosed please find a copy of the notice that Atlantic Wind LLC is filing an Application in the above proceeding. This notice is also being served on the host communities and stakeholders and published in local newspapers.

The Application contains detailed information regarding the proposed Deer River Wind Farm Project, which is a wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas. The Project is proposed to be located on leased private land.

Once the Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. Article 10 requires that all proceedings on the Application, including a final decision by the Siting Board, be completed within 12 months of when the Application is determined to be complete.

Please feel free to contact me if you have any questions regarding the above.

Yours truly,



James A. Muscato II

Laura K. Bomyea

YOUNG/SOMMER LLC

Attorneys for Atlantic Wind LLC

Enclosure: Notice of Submission of Application

Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

Atlantic Wind, LLC (Applicant) is proposing to construct a major electric generating facility under Article 10 of the New York Public Service Law (Facility). This notice announces that on or about January 18, 2019, the Applicant will file an Application pursuant to 16 NYCRR 1000.6 seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (Siting Board) authorizing the construction and operation of the Facility.

The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

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Contact Information

Atlantic Wind LLC
Walter Meisner
Avangrid Renewables
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. No. (315)874-4231 or 1-844-308-4616 (toll free)
DeerRiverWind@avangrid.com

DPS Article 10 Coordinator
James Denn
NYS Department of Public Service
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Young / Sommer LLC

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ALLYSSA T. MOODY, RP
AMY S. YOUNG

Writer's Telephone: 249
lbomyea@youngsommer.com

January 11, 2019

VIA FIRST-CLASS MAIL

NYS Assemblyman Ken Blankenbush
NYS Assembly District: 117
Albany Office
Legislative Office Building, Room 322
Albany, NY 12247

***Re: Notice of Atlantic Wind LLC's Application for the Deer River Wind Farm
Case No. 16-F-0267***

Dear Assemblyman Blankenbush:

As you may be aware, Atlantic Wind LLC (Applicant), a subsidiary of Avangrid Renewables, LLC (AR), proposes to construct a major electric generating facility in the Towns of Pinckney and Harrisburg in Lewis County, New York, which would interconnect to the electric grid in the Town of Rodman, Jefferson County. To construct the facility, the Applicant is seeking a Certificate of Environmental Compatibility and Public Need ("CECPN") from the New York State Board on Electric Generating Siting and the Environment ("Siting Board") pursuant to Article 10 of the Public Service Law and the Siting Board's rules (16 NYCRR Part 1000). In accordance with the requirements of 16 NYCRR 1000.7 (b)(2), enclosed please find a copy of the notice that Atlantic Wind LLC is filing an Application in the above proceeding. This notice is also being served on the host communities and stakeholders and published in local newspapers.

The Application contains detailed information regarding the proposed Deer River Wind Farm Project, which is a wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas. The Project is proposed to be located on leased private land.

Once the Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. Article 10 requires that all proceedings on the Application, including a final decision by the Siting Board, be completed within 12 months of when the Application is determined to be complete.

Please feel free to contact me if you have any questions regarding the above.

Yours truly,

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James A. Muscato II

Laura K. Bomyea

YOUNG/SOMMER LLC

Attorneys for Atlantic Wind LLC

Enclosure: Notice of Submission of Application

Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

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The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

The Facility is a zero-emission wind energy facility that will assist the State in meeting the goals of the State Energy Plan, which include obtaining 50% of energy generation from renewable sources by 2030 and significantly reducing greenhouse gas emissions. Other positive impacts of the Facility include diversification of energy supplies, new employment opportunities (both temporary construction employment and full-time jobs), and increased revenues to County and local tax bases, payments to the local hospitality industry, and purchase of local supplies and goods. In addition, the Applicant has attempted to minimize impacts to land associated with the Facility by limiting the disturbance to forested lands and wetlands to the maximum extent practicable. However, the construction and operation of the Facility may result in some environmental impacts as more fully described in the Application, including, but not limited to: impacts on terrestrial ecology, including avian and bat species; minor impacts to forested land, wetlands and agricultural lands; and impacts to people, including noise, traffic and visual impacts.

Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application.

The Article 10 regulations outlining the required contents of the Application can be found at 16 NYCRR 1001.1 *et seq.* The Application includes, among other things: an analysis of the environmental setting of the Facility, a description of the Facility, including preliminary design drawings and related information; copies of reports, studies and plans submitted in support of the Application; and an assessment of impacts of construction and/or operation of the Facility relating to land use; consistency with State energy planning objectives, including climate change and renewable energy goals; public health and safety; terrestrial ecology, water resources and aquatic ecology, including avian and bat species and wetlands; communications, transportation and utilities; cultural, historical and recreational resources; visual, including shadow flicker; sound; electric magnetic fields; and impacts on the statewide electrical system.

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Contact Information

Atlantic Wind LLC
Walter Meisner
Avangrid Renewables
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. No. (315)874-4231 or 1-844-308-4616 (toll free)
DeerRiverWind@avangrid.com

DPS Article 10 Coordinator
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Tel. No. (518) 474-7080
james.denn@dps.ny.gov

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Albany, New York 12223-1350

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January 11, 2019

VIA FIRST-CLASS MAIL

NYS Senator Joseph Griffo
NYS Senate District: 47
172 State Street, Capitol Building
Room 413C
Albany, NY 12247

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Case No. 16-F-0267***

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January 11, 2019

VIA FIRST-CLASS MAIL

NYS Senator Patricia Ritchie
NYS Senate District: 48
Albany Office
Legislative Office Building, Room 412
Albany, NY 12247

***Re: Notice of Atlantic Wind LLC's Application for the Deer River Wind Farm
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Stephen Bernat, Town Supervisor
Town of Montague
3620 O'Brien Rd
Lowville, NY 13367

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Case No. 16-F-0267***

Dear Supervisor Bernat:

As you may be aware, Atlantic Wind LLC (Applicant), a subsidiary of Avangrid Renewables, LLC (AR), proposes to construct a major electric generating facility in the Towns of Pinckney and Harrisburg in Lewis County, New York, which would interconnect to the electric grid in the Town of Rodman, Jefferson County. To construct the facility, the Applicant is seeking a Certificate of Environmental Compatibility and Public Need ("CECPN") from the New York State Board on Electric Generating Siting and the Environment ("Siting Board") pursuant to Article 10 of the Public Service Law and the Siting Board's rules (16 NYCRR Part 1000). In accordance with the requirements of 16 NYCRR 1000.7 (b)(2), enclosed please find a copy of the notice that Atlantic Wind LLC is filing an Application in the above proceeding. This notice is also being served on the host communities and stakeholders and published in local newspapers.

The Application contains detailed information regarding the proposed Deer River Wind Farm Project, which is a wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas. The Project is proposed to be located on leased private land.

Once the Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. Article 10 requires that all proceedings on the Application, including a final decision by the Siting Board, be completed within 12 months of when the Application is determined to be complete.

Please feel free to contact me if you have any questions regarding the above.

Yours truly,

Handwritten signatures of James A. Muscato II and Laura K. Bomyea.

James A. Muscato II

Laura K. Bomyea

YOUNG/SOMMER LLC

Attorneys for Atlantic Wind LLC

Enclosure: Notice of Submission of Application

Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

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The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

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Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application.

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Contact Information

Atlantic Wind LLC
Walter Meisner
Avangrid Renewables
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. No. (315)874-4231 or 1-844-308-4616 (toll free)
DeerRiverWind@avangrid.com

DPS Article 10 Coordinator
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Tel. No. (518) 474-7080
james.denn@dps.ny.gov

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Honorable Kathleen H. Burgess
Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza
Agency Building 3
Albany, New York 12223-1350

Young / Sommer LLC

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SENIOR COUNSEL

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KRISTIN CARTER ROWE
STEVEN D. WILSON

PARALEGALS

ALLYSSA T. MOODY, RP
AMY S. YOUNG

Writer's Telephone: 249
lbomyea@youngsommer.com

January 11, 2019

VIA FIRST-CLASS MAIL

Sherry Harmych, Town Supervisor
Town of Pinckney
587 County Route 194
Copenhagen, NY 13626

***Re: Notice of Atlantic Wind LLC's Application for the Deer River Wind Farm
Case No. 16-F-0267***

Dear Supervisor Harmych:

As you may be aware, Atlantic Wind LLC (Applicant), a subsidiary of Avangrid Renewables, LLC (AR), proposes to construct a major electric generating facility in the Towns of Pinckney and Harrisburg in Lewis County, New York, which would interconnect to the electric grid in the Town of Rodman, Jefferson County. To construct the facility, the Applicant is seeking a Certificate of Environmental Compatibility and Public Need ("CECPN") from the New York State Board on Electric Generating Siting and the Environment ("Siting Board") pursuant to Article 10 of the Public Service Law and the Siting Board's rules (16 NYCRR Part 1000). In accordance with the requirements of 16 NYCRR 1000.7 (b)(2), enclosed please find a copy of the notice that Atlantic Wind LLC is filing an Application in the above proceeding. This notice is also being served on the host communities and stakeholders and published in local newspapers.

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Please feel free to contact me if you have any questions regarding the above.

Yours truly,

A handwritten signature in cursive script, appearing to read "James A. Muscato II".

James A. Muscato II

Laura K. Bomyea

YOUNG/SOMMER LLC

Attorneys for Atlantic Wind LLC

Enclosure: Notice of Submission of Application

Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

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PARALEGALS

ALLYSSA T. MOODY, RP
AMY S. YOUNG

Writer's Telephone: 249
lbomyea@youngsommer.com

January 11, 2019

VIA FIRST-CLASS MAIL

Gary Stinson, Town Supervisor
Town of Rodman
12509 School Street
Rodman, NY 13682

***Re: Notice of Atlantic Wind LLC's Application for the Deer River Wind Farm
Case No. 16-F-0267***

Dear Supervisor Stinson:

As you may be aware, Atlantic Wind LLC (Applicant), a subsidiary of Avangrid Renewables, LLC (AR), proposes to construct a major electric generating facility in the Towns of Pinckney and Harrisburg in Lewis County, New York, which would interconnect to the electric grid in the Town of Rodman, Jefferson County. To construct the facility, the Applicant is seeking a Certificate of Environmental Compatibility and Public Need ("CECPN") from the New York State Board on Electric Generating Siting and the Environment ("Siting Board") pursuant to Article 10 of the Public Service Law and the Siting Board's rules (16 NYCRR Part 1000). In accordance with the requirements of 16 NYCRR 1000.7 (b)(2), enclosed please find a copy of the notice that Atlantic Wind LLC is filing an Application in the above proceeding. This notice is also being served on the host communities and stakeholders and published in local newspapers.

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Laura K. Bomyea
YOUNG/SOMMER LLC
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Attachment '5'

NEW YORK STATE PUBLIC SERVICE COMMISSION

Application of Atlantic Wind LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the Public Service Law for the Deer River Wind Farm Project in the Towns of Pinckney and Harrisburg in Lewis County, with electronical transmission interconnection proposed in the Town of Rodman in Jefferson County.

AFFIDAVIT OF SERVICE

Case No. 16-F-0267

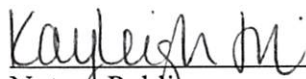
STATE OF NEW YORK)
COUNTY OF ALBANY) ss.:

LAURA K. BOMYEA, being duly sworn, deposes and says that on the 8th day of January, in the year 2019, she served a copy of Atlantic Wind's Notice of Submission of Application for the Deer River Wind Farm Project, via electronic mail upon the Party List for Case 16-F-0267 as it existed on January 8, 2019, as shown in the enclosed communication.



LAURA K. BOMYEA

Sworn to me before me
This 7th day of February, 2019


Notary Public

KAYLEIGH J. ROBINSON
Notary Public, State of New York
No. 01CR6166964
Qualified in Schoharie County
Commission Expires May 29, 2019

Laura Bomyea

From: Laura Bomyea
Sent: Tuesday, January 08, 2019 2:33 PM
To: 'lisa.zafontemaffei@nationalgrid.com'; 'lisa.wilkinson@dec.ny.gov'; 'Wells, Tara (AGRICULTURE)'; 'Thomas1, Richard (HEALTH)'; 'rschell@centralny.twcbc.com'; Saviola, Michael (AGRICULTURE); 'towncouncil20@gmail.com'; 'usarmy.drum.imcom-atlantic.list.paio@mail.mil'; James Muscato; 'cmuessigbrodt@trcsolutions.com'; 'dmetcalfe@cullenanddykman.com'; 'mgebo@gebolaw.com'; 'Mark C. Davis'; 'Cerbin, Andrea (DPS)'; 'Jim Burrows'; 'Binder, Jonathan A (DEC)'; 'Steve Bernat'; 'Heath Noreen Ash'; 'Costello, James A (DPS)'; 'Fisher, Melissa'; Meisner, Walter; Edick, Rudyard (DEC)
Subject: Case 16-F-0267, Deer River Notice of Application
Attachments: Deer River Notice of Application.pdf

Parties,

Attached please find a Notice of Filing of Application for the Deer River Wind Farm Project.

Sincerely,

Laura K. Bomyea
Associate Attorney
Young / Sommer LLC
ATTORNEYS AT LAW
office: 518.438.9907 Ext. 249
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Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

Atlantic Wind, LLC (Applicant) is proposing to construct a major electric generating facility under Article 10 of the New York Public Service Law (Facility). This notice announces that on or about January 18, 2019, the Applicant will file an Application pursuant to 16 NYCRR 1000.6 seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (Siting Board) authorizing the construction and operation of the Facility.

The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

The Facility is a zero-emission wind energy facility that will assist the State in meeting the goals of the State Energy Plan, which include obtaining 50% of energy generation from renewable sources by 2030 and significantly reducing greenhouse gas emissions. Other positive impacts of the Facility include diversification of energy supplies, new employment opportunities (both temporary construction employment and full-time jobs), and increased revenues to County and local tax bases, payments to the local hospitality industry, and purchase of local supplies and goods. In addition, the Applicant has attempted to minimize impacts to land associated with the Facility by limiting the disturbance to forested lands and wetlands to the maximum extent practicable. However, the construction and operation of the Facility may result in some environmental impacts as more fully described in the Application, including, but not limited to: impacts on terrestrial ecology, including avian and bat species; minor impacts to forested land, wetlands and agricultural lands; and impacts to people, including noise, traffic and visual impacts.

Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application.

The Article 10 regulations outlining the required contents of the Application can be found at 16 NYCRR 1001.1 *et seq.* The Application includes, among other things: an analysis of the environmental setting of the Facility, a description of the Facility, including preliminary design drawings and related information; copies of reports, studies and plans submitted in support of the Application; and an assessment of impacts of construction and/or operation of the Facility relating to land use; consistency with State energy planning objectives, including climate change and renewable energy goals; public health and safety; terrestrial ecology, water resources and aquatic ecology, including avian and bat species and wetlands; communications, transportation and utilities; cultural, historical and recreational resources; visual, including shadow flicker; sound; electric magnetic fields; and impacts on the statewide electrical system.

Pursuant to the Article 10 process, this notice is being provided in accordance with 16 NYCRR 1000.7, and will be published at least three days prior to the filing of the Application. In addition, a copy of the Application will be served on the Chief Executive Officer of each municipality in which any portion of the Facility is located, as well as those persons and agencies enumerated in 16 NYCRR 1000.6.

Once an Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. The Siting Board will also issue a notice of availability of application intervenor funds that are available to be used by parties to participate in formal review of the Application. A pre-hearing conference will be scheduled by the Hearing Examiner to identify intervenors, award intervenor funds, identify issues for the hearing, and establish a case schedule. Additional hearings regarding the application and project impact assessments will be scheduled by the Hearing Examiner as needed. After hearings, the stakeholders may brief their positions and the Hearing Examiner will issue a recommended decision upon which the Siting Board will base its decision. Article 10 requires that all

proceedings on the Application, including a final decision by the Siting Board, must be completed within 12 months of when the Application is determined to be complete.

Upon filing the Application, the Applicant will provide funding in the amount of \$101,400 to be disbursed by the Siting Board to municipalities and other local parties to help pay expenses, including attorneys and consultants, associated with participating in the Article 10 process during the application review phase. Fifty percent (50%) of these intervenor funds are reserved for municipalities. Following the filing of an Application, the Hearing Examiner or the Secretary will issue a notice of availability of application intervenor funds that provides a schedule and related information describing how interested members of the public may apply for application funds. Requests for application funds must be submitted to the Hearing Examiner within thirty (30) days after the issuance of the notice of the availability of application intervenor funds. Following the submittal of any intervenor funding requests, the Hearing Examiner may schedule a pre-hearing conference to consider fund requests.

The record of this proceeding, including the Application, may be examined during normal business hours at the Offices of the New York State Department of Public Service (DPS) at 3 Empire State Plaza, Albany, NY 12223; Atlantic Wind's Local Project Office in Lowville (7650 North State Street, Suite 1); and at the following public repositories: Pinckney Town Hall, 587 County Route 194, Copenhagen, NY 13626; Lowville Free Library, 5387 Dayan Street, Lowville, NY 13367; Rodman Public Library, 12509 School Street, Rodman, NY 13682. Libraries often have free internet access.

Contact Information

Atlantic Wind LLC
Walter Meisner
Avangrid Renewables
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. No. (315)874-4231 or 1-844-308-4616 (toll free)
DeerRiverWind@avangrid.com

DPS Article 10 Coordinator
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Tel. No. (518) 474-7080
james.denn@dps.ny.gov

The Application will also be available at the DPS website at (<http://www.dps.ny.gov/>). To access documents, go to "Search" on the top of the webpage and search using the Case Number 16-F-0267 or the direct link <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-F-0267&submit=Search> or by going to the Project-specific website maintained by the Applicant: <http://www.avangridrenewables.com/deerriver/>

File a Request for Notices

Any interested member of the public may file a request with the DPS Secretary to receive copies of all notices concerning the Project. Written requests should be sent to the DPS Secretary at secretary@dps.ny.gov or sent by mail to the following address:

Honorable Kathleen H. Burgess
Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza
Agency Building 3
Albany, New York 12223-1350

Attachment '6'

STATE OF NEW YORK

BOARD ON ELECTRIC GENERATION SITING AND THE ENVIRONMENT

Application of Atlantic Wind LLC for a Certificate of
Environmental Compatibility and Public Need Pursuant to
Article 10 for Construction of the Deer River Wind Project
In Lewis and Jefferson Counties

Case No. 16-F-0267

AFFIDAVIT OF SERVICE

STATE OF NEW YORK)

COUNTY OF Oswego) ss.:

Rosanne Rodriguez, being duly sworn, deposes and says that on the 4 day of
January, 2019, he/she served a copy of the attached Deer River Notice of Application
~~[INSERT NAME OF DOCUMENT]~~
SERVED], upon the following recipients identified in the attached list, via regular mail.

Rosanne Rodriguez
Account Manager
ACLS Direct LLC

Rosanne Rodriguez

Sworn to me before me this
14 day of January, 2019

Patricia D McIntosh
Notary Public

PATRICIA D MCINTOSH
Notary Public - State of New York
NO. 01MC6137068
Qualified in Oswego County
My Commission Expires Nov 14, 2021

<i>Title</i>	<i>Company</i>	<i>Alternate Address</i>	<i>Delivery Address</i>	<i>City</i>	<i>St</i>	<i>ZIP+4</i>
			384 College Hwy	Southampton	MA	01073-9375
			9 Liberty Ln	Hanscom Afb	MA	01731-2674
			22 Rancourt Dr	Wilton	NH	03086-5339
			25 Cross St # B	Littleton	NH	03561-4900
			25 Cross St Apt B	Littleton	NH	03561-4900
			137 Midway Oval	Groton	CT	06340-4845
			29 Pleasant Dr	Cheshire	CT	06410-2241
			92 Chestnut Tree Hill Road Ext	Oxford	CT	06478-1456
			77 W 17th St	Bayonne	NJ	07002-2603
			1 Independence Ct Apt 1010	Hoboken	NJ	07030-6765
			48 Upper Mountain Ave	Montville	NJ	07045-9426
			414 Lake Ave	Lyndhurst	NJ	07071-1119
			45 Forestdale Rd	Kinnelon	NJ	07405-2558
			871 County Rt 517	Glenwood	NJ	07418-1601
			8 Esterville Ct	Hewitt	NJ	07421-3725
			519 Warwick Tpke	Hewitt	NJ	07421-2419
			850 Warwick Tpke	Hewitt	NJ	07421-1777
			4 Kristen Ln	Vernon	NJ	07462-3020
			760 Berdan Ave	Wayne	NJ	07470-2031
			339 Lakeside Blvd	Hopatcong	NJ	07843-1620
			339 Lakeside Blvd	Hopatcong	NJ	07843-1620
			500 W Stafford Ave	Laurel Springs	NJ	08021-3104
			66 Pinsher Point Rd	Lohatcong	NJ	8865
			749 Sampson Ave	Phillipsburg	NJ	08865-4439
			7 Hubbard Cir	Bronxville	NY	10708-4407
			1250 Bergen Ave # 2	Brooklyn	NY	11234-5811
Eastern Region Reg	US Federal Aviation Administration		1 Aviation Plz	Jamaica	NY	11434-4809
			43 County Line Rd	Farmingdale	NY	11735-6502
			43 County Line Rd	Farmingdale	NY	11735-6502
			17 Urban Dr	Selden	NY	11784-2627
			60 McGraw St	Shirley	NY	11967-2017
			4 Sand Rd	Castleton	NY	12033-1816
Board Chair	New York Independent System Operator		10 Krey Blvd	Rensselaer	NY	12144-9681

Deputy Commissioner	NYS Office of Parks, Recreation and Historic Preservation	New York State Division For Historic Preservation	PO Box 189	Waterford	NY	12188-0189
Director of Governor's Office	New York State Research and Development Authority (NYSERDA)		17 Columbia Cir	Albany	NY	12203-6399
	The Nature Conservancy		195 New Karner Rd Ste 200	Albany	NY	12205-4651
Commissioner	NYS Department of Environmental Conservation		625 Broadway	Albany	NY	12207-2942
			429 W Lawrence St	Albany	NY	12208-2021
	NY Public Interest Research Group	Albany - Legislative	107 Washington Ave	Albany	NY	12210-2231
Secretary	NYS Department of Public Service		Empire State Plaza Agency Building 3	Albany	NY	12223
	NYS Governor's Office		Nys State Capitol Building	Albany	NY	12224
	NYS Attorney General		State Capital Building	Albany	NY	12224
Secretary of State	NYS Department of State	99 Washington Avenue	One Commerce Place	Albany	NY	12231-0001
	NYS Department of Health		100 Washington Avenue	Albany	NY	12232-0001
Commissioner	NYS Department of Agriculture and Markets		10B Airline Dr	Albany	NY	12235-1000
Commissioner	NYS Division of Homeland Security and Emergency Services	1220 Washington Avenue	State Office Campus Building 7A, Suite 710	Albany	NY	12242-0001
			28 Terbar Loop	New Paltz	NY	12561-4026
	Verizon		5002 S Catherine St	Plattsburgh	NY	12901-3392
C/O David Coursen			14 Vista Ln	Lake Placid	NY	12946-3620
President	Northern New York Audubon Society		PO Box 741	Tupper Lake	NY	12986-0741
			6010 E Lake Rd	Cazenovia	NY	13035-9367
			32 Elderberry Ln	Central Square	NY	13036-2152
Field Supervisor	US Fish and Wildlife Service		3817 Luker Rd	Cortland	NY	13045-9385
			202 Lafayette Ln	Fayetteville	NY	13066-1456
			122 N Burdick St	Fayetteville	NY	13066-1339
			122 N Burdick St	Fayetteville	NY	13066-1339
			1092 Cty Route 8	Fulton	NY	13069-4718
			408 E Broadway	Fulton	NY	13069-2319
State Assemblyman	State Assemblyman William A. Thompson	District Office	201 N 2nd St	Fulton	NY	13069-1205
			583 Gilbert Mills Rd	Fulton	NY	13069-4559
			277 Phinney Rd	Hannibal	NY	13074-2342
			3774 State Route 31 Apt 1007	Liverpool	NY	13090-1382
			2365 Patterson Rd	Marietta	NY	13110-3105
			PO Box 156	New Haven	NY	13121-0156
			375 W 5th Street Rd	Oswego	NY	13126-6578
			PO Box 76	Oswego	NY	13126-0076
County Clerk	Oswego County		46 E Bridge St	Oswego	NY	13126-2118

County Administrator	Oswego County		46 E Bridge St	Oswego	NY	13126-2118
			3283 State Route 69	Parish	NY	13131-3206
			11 James St	Pulaski	NY	13142-4412
	Richland Airpark Inc		RR Box 367	Richland	NY	13144
Superintendent	Sandy Creek Central School District		PO Box 248	Sandy Creek	NY	13145-0248
	Mud Creek Club Inc.		4859 State Route 80	Tully	NY	13159-3001
	Pinckney Hugo Group		760 W Genesee St	Syracuse	NY	13204-2306
			PO Box 177	Brantingham	NY	13312-0177
			6688 Camp Rd	Glenfield	NY	13343-2621
			PO Box 136	Glenfield	NY	13343-0136
			7007 Sweeney Rd	Greig	NY	13345-1830
	Lewis County Fire & Emergency Services	Public Safety Building	5252 Outer Stowe St	Lowville	NY	13367
	Lowville Fire Department		5420 Parkway	Lowville	NY	13367
	Cornell Cooperative Extension		Lewis County, 5274 Outer Stowe Street	Lowville	NY	13367
	Duflo Airport		RR 3 Box 92	Lowville	NY	13367
Superintendent	Lewis County Highway Department		South State Street	Lowville	NY	13367
	Tug Hill Farm Airport			Lowville	NY	13367
			153 Private Rd.	Lowville	NY	13367
Attn: Lewis Co Treasurer		Court House	State St	Lowville	NY	13367
County Clerk	Lewis County		Lewis County Court House	Lowville	NY	13367
County Executive	Lewis County		Lewis County Court House	Lowville	NY	13367
			6510 Liberty Rd	Lowville	NY	13367-2715
			5601 Trinity Ave	Lowville	NY	13367-1416
			5085 W Martinsburg Rd	Lowville	NY	13367-2138
			7155 Van Dressen Rd	Lowville	NY	13367-4520
			3837 State Route 177	Lowville	NY	13367-4506
			6953 Olmstead Rd	Lowville	NY	13367-2404
			7247 Sears Pond Rd	Lowville	NY	13367-2615
			6478 Sears Pond Rd	Lowville	NY	13367-2604
			2408 State Route 177	Lowville	NY	13367-4512
			PO Box 627	Lowville	NY	13367-0627
			7215 Sears Pond Rd	Lowville	NY	13367-2615
			7939 State Route 12	Lowville	NY	13367-2823
			4330 State Route 177	Lowville	NY	13367-4501

			5291 Outer Stowe St	Lowville	NY	13367-2232
President	Lewis County Historian, Lewis	Masonic Temple Building	PO Box 446 7552 S State St	Lowville	NY	13367-0446
	Martinsburg Fire Department	5609 Whitaker Road	PO Box 353	Lowville	NY	13367-0353
District Manager	Lewis County Soil and Water Conservation District		5274 Outer Stowe St Ste 1	Lowville	NY	13367-2206
	LOWVILLE FREE LIBRARY		5387 Dayan St	Lowville	NY	13367-1126
Supervisor	Town of Lowville, Lewis County		5533 Bostwick St	Lowville	NY	13367-1234
Superintendent	Town of Montague Highway Department		6253 Salmon River Rd	Lowville	NY	13367-2622
	Lewis County Chamber of Commerce		7576 S State St	Lowville	NY	13367-1529
			10298 State Route 26	Lowville	NY	13367-2943
			9831 East Rd	Lowville	NY	13367-1733
			3140 Gardner Rd	Lowville	NY	13367-2608
			5497 Shady Ave	Lowville	NY	13367-1631
			4218 State Route 177	Lowville	NY	13367-4503
			6955 Beech Hill Rd	Lowville	NY	13367-2543
			6460 Number Four Rd	Lowville	NY	13367-3220
c/o Lewis County Treasurer			7760 N State St	Lowville	NY	13367-1220
	Lewis County Department of F	Lewis County Court House	7660 N State St	Lowville	NY	13367-1328
Director of Planning	Lewis County Department of Planning		7660 N State St	Lowville	NY	13367-1328
c/o Lewis County Treasurer			7660 N State St	Lowville	NY	13367-1328
Superintendent	Lowville Academy and Central School District		7668 N State St	Lowville	NY	13367-1353
School District 10			7668 N State St	Lowville	NY	13367-1353
			6572 E Road Ext	Lowville	NY	13367-1544
Supervisor	Town of Harrisburg		3620 Obrien Rd	Lowville	NY	13367-2913
			2203 State Route 177	Lowville	NY	13367-4514
			2667 Boshart Rd	Lowville	NY	13367-4515
	Avangrid Renewables		7650 N State St Ste 1	Lowville	NY	13367-1351
Supervisor	Town of Martinsburg, Lewis County		PO Box 36	Martinsburg	NY	13404-0036
		Rte. 20	PO Box 94	Morrisville	NY	13408-0094
Town Supervisor	Town of Redfield, Oswego County		1 Balcom Dr.	Redfield	NY	13437
	Redfield Fire Department		4879 County Route 17	Redfield	NY	13437
			16 Hayes Rd	Redfield	NY	13437-2014
State Senator	State Senator Joseph A. Griffo, 47th Senate District		207 Genesee St Rm 408	Utica	NY	13501-2812
US Representative	US Representative Claudia Tenney, District 22		258 Genesee St	Utica	NY	13502-4636
			1817 County Rte. 156	Watertown	NY	13601

			26231 County Route 160	Watertown	NY	13601
			17876 Washington St.	Watertown	NY	13601
North Country Regi	Empire State Development Co	Dulles State Office Building	North Country Region: Watertown Office	Watertown	NY	13601
State Senator	State Senator Patty Ritchie, 48th Senate District		Dulles State Office Building Room 418	Watertown	NY	13601
Executive Director	Jefferson County Soil and Water Conservation District		21168 Ny-232	Watertown	NY	13601
			16661 County Rd 155	Watertown	NY	13601
			26279 County Rd. 160	Watertown	NY	13601
			811 Cronk Rd	Watertown	NY	13601-5847
			804 Cronk Rd	Watertown	NY	13601-5852
			933 Cronk Rd	Watertown	NY	13601-5847
			17193 County Route 156	Watertown	NY	13601-5741
			21288 Gould Rd	Watertown	NY	13601-5238
			20820 Weaver Rd	Watertown	NY	13601-5616
			16661 County Route 155	Watertown	NY	13601-9352
Executive Director	NYS Tug Hill Commission	Dulles State Office Building	317 Washington St	Watertown	NY	13601-3782
P.E., Regional Direc	NYS Department of Transporta	Dulles State Office Building	317 Washington St Ste 1	Watertown	NY	13601-3768
Superintendent	Watertown City School Distric	1351 Washington Street	PO Box 586	Watertown	NY	13601-0586
US Representative	US Representative Elise Stefanik, District 21		120 Washington St Ste 200	Watertown	NY	13601-3370
Interim Director	Jefferson County Department of Planning and Economic Development		175 Arsenal St	Watertown	NY	13601-2568
Superintendent	Jefferson County Highway Department		21897 County Route 190	Watertown	NY	13601-1028
Director	Jefferson County Historical Society		228 Washington St	Watertown	NY	13601-3379
	Town of Watertown Fire Department		22825 County Route 67	Watertown	NY	13601-9362
Town Supervisor	Town of Watertown, Jefferson County		22867 County Route 67	Watertown	NY	13601-9362
Director of Adminis	Guilfoyle Ambulance Services		438 Newell St	Watertown	NY	13601-2428
	Jefferson County Fire & Emergency Management		753 Waterman Dr	Watertown	NY	13601-2361
			508 Academy St	Watertown	NY	13601-3424
			953 Cronk Rd	Watertown	NY	13601-5847
	Fort Drum Regional Liason Organization		200 Washington St Ste 406	Watertown	NY	13601-3335
			18176 County Route 156	Watertown	NY	13601-5734
			8822 Whitesville Rd	Watertown	NY	13601-5850
			13651 County Route 156	Watertown	NY	13601-5735
			215 Iroquois Ave W	Watertown	NY	13601-4521
			9573 Whitesville Rd	Watertown	NY	13601-5844
			934 Cronk Rd	Watertown	NY	13601-4814

			20719 Reasoner Rd	Watertown	NY	13601-5270
			24244 Nys Route 37	Watertown	NY	13601-5147
			13825 County Route 156	Watertown	NY	13601-5735
			25349 Freeman Creek Rd	Watertown	NY	13601-5729
			13225 County Route 156	Watertown	NY	13601-5759
			13115 County Route 156	Watertown	NY	13601-5759
			13109 County Route 156	Watertown	NY	13601-5759
			13101 County Route 156	Watertown	NY	13601-5759
			13102 County Route 156	Watertown	NY	13601-5759
			118 Charles St	Watertown	NY	13601-1508
County Clerk	Jefferson County		175 Arsenal St	Watertown	NY	13601-2528
County Administrator	Jefferson County		175 Arsenal St	Watertown	NY	13601-2528
c/o County Treasurer	New York State DEC		175 Arsenal St	Watertown	NY	13601-2528
Regional Director	NYS Department of Environmental Conservation (Region 6 Headquarters)		317 Washington St	Watertown	NY	13601-3744
Chairman	Development Authority of the North Country		317 Washington St	Watertown	NY	13601-3744
			230 Franklin St	Watertown	NY	13601-3996
			230 Franklin St	Watertown	NY	13601-3996
			26279 Middle Rd	Watertown	NY	13601-5474
			26279 Middle Rd	Watertown	NY	13601-5474
			13131 County Route 156	Watertown	NY	13601-5759
			8799 Whitesville Rd	Watertown	NY	13601-5844
			9409 Whitesville Rd	Watertown	NY	13601-5844
			473 Waterman Rd	Watertown	NY	13601-5845
			997 Cronk Rd	Watertown	NY	13601-5847
			8938 Corey Rd	Watertown	NY	13601-5851
	Tug Hill Tomorrow Land Trust		PO Box 6063	Watertown	NY	13601-6063
			PO Box 6063	Watertown	NY	13601-6063
	South Jefferson Chamber of Commerce		14 Church Street	Adams	NY	13605
			PO Box 55	Adams	NY	13605-0055
Superintendent	South Jefferson Central School	South Jefferson Csd	PO Box 10	Adams	NY	13605-0010
			76 E Church St	Adams	NY	13605-1103
			20 N Park St	Adams	NY	13605-1132
			19489 Nys Rte 177	Adams Center	NY	13606
			19489 Nys Rte 177	Adams Center	NY	13606

			19489 Nys Rte 177	Adams Center	NY	13606
			21440 Main Rd	Adams Center	NY	13606-2214
			148 Maple St	Black River	NY	13612-3105
Supervisor	Town of Rutland, Jefferson County		28411 State Route 126	Black River	NY	13612-2178
			19932 Miser Rd	Black River	NY	13612-2179
			300 Pike St.	Brownville	NY	13615
			300 Pike St	Brownville	NY	13615
			37227 Nys Route 3	Carthage	NY	13619-3331
			32641 State Route 126	Carthage	NY	13619-8505
State Assemblyman	State Assemblyman Ken Blank	District Office	40 Franklin St Ste 2	Carthage	NY	13619-1377
Superintendent	Carthage Central School District		25059 Woolworth St	Carthage	NY	13619-9592
Town Supervisor	Town of Champion, Jefferson County		35087 Lewis Loop	Carthage	NY	13619-3372
Supervisor	Town of Denmark, Lewis County		3707 Roberts Rd	Carthage	NY	13619-3419
			36640 Nys Route 126	Carthage	NY	13619-3300
			24699 Co Route 47	Carthage	NY	13619-9529
			804 Parham St	Carthage	NY	13619-1031
			804 Parham St	Carthage	NY	13619-1031
			988 Alexandria St	Carthage	NY	13619-1052
			PO Box 22	Castorland	NY	13620-0022
	Castorland Fire Department	5187 St Rte 410	PO Box 116	Castorland	NY	13620-0116
			4791 State Route 410	Castorland	NY	13620-2301
			PO Box 107	Castorland	NY	13620-0107
			37270 Sylvester Rd	Clayton	NY	13624-3100
			2449 Stoddard Street	Copenhagen	NY	13626
			7087 Liberty Rd	Copenhagen	NY	13626
			8918 Corey Rd.	Copenhagen	NY	13626
			8234 River Rd	Copenhagen	NY	13626
			3003 Mechanic St	Copenhagen	NY	13626
			PO Box 108	Copenhagen	NY	13626-0108
			7006 Liberty Rd	Copenhagen	NY	13626-3502
			8145 McGowan Rd	Copenhagen	NY	13626-3428
			907 State Route 177	Copenhagen	NY	13626-3418
			535 State Route 177	Copenhagen	NY	13626-3410
			963 County Route 194	Copenhagen	NY	13626-3337

			7106 Liberty Rd	Copenhagen	NY	13626-3504
			3127 Humphry Rd	Copenhagen	NY	13626-2929
			PO Box 542	Copenhagen	NY	13626-0542
			7054 Liberty Rd	Copenhagen	NY	13626-3502
Superintendent	Copenhagen School District	3020 Mechanic Street	PO Box 30	Copenhagen	NY	13626-0030
Superintendent	Town of Harrisburg Highway Department		7886 Cobb Rd	Copenhagen	NY	13626-2914
Mayor	Village of Copenhagen		PO Box 237	Copenhagen	NY	13626-0237
	Copenhagen Volunteer Fire Department		PO Box 364	Copenhagen	NY	13626-0364
			7896 Mile Square Rd	Copenhagen	NY	13626-2948
			PO Box 72	Copenhagen	NY	13626-0072
			8020 Seven By Nine Rd	Copenhagen	NY	13626-3424
			1913 State Route 177	Copenhagen	NY	13626-2945
			524 State Route 177	Copenhagen	NY	13626-3409
			8103 River Rd	Copenhagen	NY	13626-3541
			8057 Seven By Nine Rd	Copenhagen	NY	13626-3425
			8401 Woodbattle Rd	Copenhagen	NY	13626-2921
			7073 Liberty Rd	Copenhagen	NY	13626-3503
			613 County Route 194	Copenhagen	NY	13626-3305
			575 County Route 194	Copenhagen	NY	13626-3305
			8268 River Rd	Copenhagen	NY	13626-3512
			PO Box 192	Copenhagen	NY	13626-0192
			PO Box 165	Copenhagen	NY	13626-0165
			PO Box 544	Copenhagen	NY	13626-0544
			2213 County Route 194	Copenhagen	NY	13626-3329
			7466 McDonald Rd	Copenhagen	NY	13626-3440
			7259 McDonald Rd	Copenhagen	NY	13626-3404
			7222 McDonald Rd	Copenhagen	NY	13626-3429
			7028 Deer River Station Rd	Copenhagen	NY	13626-2812
			27444 Cramer Rd	Copenhagen	NY	13626-3164
			886 County Route 194	Copenhagen	NY	13626-3308
			8029 River Rd	Copenhagen	NY	13626-3541
Supervisor	Town of Pinckney		587 County Route 194	Copenhagen	NY	13626-3305
Highway Superinter	Town of Pinckney Highway Department		587 County Route 194	Copenhagen	NY	13626-3305
	PINCKNEY TOWN HALL		587 County Route 194	Copenhagen	NY	13626-3305

			956 County Route 194	Copenhagen	NY	13626-3308
			1136 County Route 194	Copenhagen	NY	13626-3326
			1136 County Route 194	Copenhagen	NY	13626-3326
			717 State Route 177	Copenhagen	NY	13626-3414
			717 State Route 177	Copenhagen	NY	13626-3414
			8037 Seven By Nine Rd	Copenhagen	NY	13626-3425
			8037 Seven By Nine Rd	Copenhagen	NY	13626-3425
Supervisor	Town of Montague		7270 McDonald Rd	Copenhagen	NY	13626-3429
			7270 McDonald Rd	Copenhagen	NY	13626-3429
			7061 Liberty Rd	Copenhagen	NY	13626-3503
			7268 Liberty Rd	Copenhagen	NY	13626-3505
			1305 State Route 177	Copenhagen	NY	13626-3508
			1305 State Route 177	Copenhagen	NY	13626-3508
			8252 River Rd	Copenhagen	NY	13626-3512
			8759 River Rd	Copenhagen	NY	13626-3517
			8759 River Rd	Copenhagen	NY	13626-3517
			8759 River Rd	Copenhagen	NY	13626-3517
			8759 River Rd	Copenhagen	NY	13626-3517
			8009 River Rd	Copenhagen	NY	13626-3541
			8009 River Rd	Copenhagen	NY	13626-3541
			25513 Co. Rt. 152	Dexter	NY	13634
	Watertown International Airport		22529 Ny-12F	Dexter	NY	13634
			25513 Co Rte 152	Dexter	NY	13634
			21375 Co Route 59	Dexter	NY	13634-2049
			29923 Ansted Rd	Evans Mills	NY	13637-3246
			7696 Marshey Rd	Harrisville	NY	13648-2418
			12376 Whitney Rd	Henderson	NY	13650-2158
			8091 Co Route 152	Henderson	NY	13650-2093
			32 Wilson St	Heuvelton	NY	13654-3184
Town Supervisor	Town of Lorraine, Jefferson County		20876 County Route 189	Lorraine	NY	13659
			7910 Hayes Rd	Lorraine	NY	13659-3186
	Lorriane Volunteer Fire Depar	20876 County Route 189	PO Box 89	Lorraine	NY	13659-0089
Town Supervisor	Town of Worth, Jefferson County		PO Box 52	Lorraine	NY	13659-0052
			439 N Main St	Mannsville	NY	13661-2200

			16507 County Route 90	Mannsville	NY	13661-3217
			1507 State Route 3	Mannsville	NY	13661-3277
	Time Warner Cable		277 Andrews St	Massena	NY	13662-3401
			County Route 69	Rodman	NY	13682
	Rodman Fire Department		21495 County Route 69	Rodman	NY	13682
			137 Pinckney Rd	Rodman	NY	13682-2188
	RODMAN PUBLIC LIBRARY	12509 School Street	PO Box B	Rodman	NY	13682-0002
Superintendent	Town of Rodman Highway Department		12509 School St	Rodman	NY	13682-9998
Town Supervisor	Town of Rodman		PO Box 523	Rodman	NY	13682-0523
			9972 Creek Rd	Rodman	NY	13682-2186
			PO Box 447	Rodman	NY	13682-0447
			PO Box 522	Rodman	NY	13682-0522
			26122 County Route 69	Rodman	NY	13682-2138
			25448 County Route 69	Rodman	NY	13682-2136
			25459 County Route 69	Rodman	NY	13682-2139
			25221 County Route 69	Rodman	NY	13682-2139
			25090 County Route 69	Rodman	NY	13682-2136
			116 Pinckney Rd	Rodman	NY	13682-2188
			116 Pinckney Rd	Rodman	NY	13682-2188
			PO Box 249	Sackets Harbor	NY	13685-0249
			155 Lake Rd	Star Lake	NY	13690-3140
			24434 Fr 265	Three Mile Bay	NY	13693
			PO Box 156	Three Mile Bay	NY	13693-0156
US Senator	US Senator Charles E. Schumer		15 Henry St Ste 100A	Binghamton	NY	13901-2724
			7785 Ditch Rd	Gasport	NY	14067-9481
			10329 Johnson Rd	Middleport	NY	14105-9301
Chief, NY Applicatio	US Army Corps of Engineers	Regulatory Branch, Buffalo District Offi	1776 Niagara St	Buffalo	NY	14207-3199
			2984 W Walworth Rd	Macedon	NY	14502-9129
			619 Lake Rd	Ontario	NY	14519-9315
			1846 Daansen Rd	Palmyra	NY	14522-9500
			15 Meadows End	Webster	NY	14580-4306
			63 Kircher Park	Webster	NY	14580-3217
			7455 Dutch Street Rd	Wolcott	NY	14590-9514
			6033 Spring Green Rd	Wolcott	NY	14590-9725

US Senator	US Senator Kirsten E. Gillibrand		100 State St Rm 4195	Rochester	NY	14614-1318
	Tug Hill Alliance for Rural Preservation		300 State St Ste 502	Rochester	NY	14614-1019
			548 Bernheisel Bridge Rd	Carlisle	PA	17015-9018
			548 Bernheisel Bridge Rd	Carlisle	PA	17015-9018
			4000E E Harrisburg Pike	Middletown	PA	17057-4651
			4000 E Harrisburg Pike	Middletown	PA	17057-4651
			3298 Rte. 147	Millersburg	PA	17061
			3298 Route 147	Millersburg	PA	17061
			1103 Cherrington Dr	Harrisburg	PA	17110-9495
			5800 Bradley Rd	Greencastle	PA	17225-9344
	Tug Hill Commission		5506 Pine Rd	Thomasville	PA	17364-9594
			5506 Pine Rd	Thomasville	PA	17364-9594
			159 Quarry Dr	Bloomsburg	PA	17815-8406
			1388 State Route 487	Bloomsburg	PA	17815-8953
			6581 Hollenbach Rd	New Tripoli	PA	18066-2412
			1010 Dancing Ridge Rd	East Stroudsburg	PA	18302-9325
			155 Lower Seese Hill Rd	Canadensis	PA	18325-7848
			5429 SR 3001	Meshoppen	PA	18630
			263 Hemlock Ln	Noxen	PA	18636-7726
			2620 Egypt Rd	Norristown	PA	19403-2302
Regional Program Manager	National Park Service	Rivers, Trails And Conservation Assistance	1201 I St NW Ste A	Washington	DC	20005-5920
Assistant Secretary	National Telecommunications and Information Administration	1401 Constitution Avenue, N.W.	Herbert C. Hoover Building (Hchb), U.S. Department of Justice	Washington	DC	20230-0001
Deputy Director, Defense	US Department of Defense		3400 Defense Pentagon Rm 5C646	Washington	DC	20301-3400
			PO Box 1017	Huntingtown	MD	20639-1017
			3968 Prospect Rd	Street	MD	21154-1516
			3968 Prospect Rd	Street	MD	21154-1516
			3968 Prospect Rd	Street	MD	21154-1516
			4233 Flowerton Rd	Baltimore	MD	21229-1502
			6843 Murray Ln	Annandale	VA	22003-1973
			757A Clayton Rd	Angier	NC	27501-8354
			2652 Glenhaven Dr	Green Cove Springs	FL	32043-5248
			1605 Yates Dr	Merritt Island	FL	32952-5928
			1731 Pepper Dr	El Cajon	CA	92021-3644



PLEASE SEE ENCLOSED

**for a Notice of Submission of Application for the
Deer River Wind Farm Project.**

As stated in this notice, Avangrid Renewables intends to file an Application under Article 10 of the New York Public Service Law on or about January 18, 2019. The Application will be submitted to the New York State Board on Electric Generation Siting and the Environment, and will be available on the websites and local document repositories listed in the attached notice.

A large graphic on the right side of the page shows two white wind turbines on a dark, rolling hill against a light gray sky.

For more information visit
<https://www.avangridrenewables.com/deerriver>

Deer River Wind Farm Project

Lewis and Jefferson Counties, New York

NOTICE OF SUBMISSION OF APPLICATION

Atlantic Wind, LLC (Applicant) is proposing to construct a major electric generating facility under Article 10 of the New York Public Service Law (Facility). This notice announces that on or about January 18, 2019, the Applicant will file an Application pursuant to 16 NYCRR 1000.6 seeking a Certificate of Environmental Compatibility and Public Need from the New York State Board on Electric Generation Siting and the Environment (Siting Board) authorizing the construction and operation of the Facility.

The Facility is a proposed wind-powered electric generation project consisting of up to 25 wind turbines generating up to 101.4 megawatts (MW) of electricity to be located in the Towns of Pinckney and Harrisburg, Lewis County, with a Point of Interconnection (POI) located in the Town of Rodman, Jefferson County. The Facility will include wind turbines, access roads, electrical collection lines, a collection substation, meteorological towers, an operation and maintenance building, and temporary construction staging and storage areas.

The Facility is a zero-emission wind energy facility that will assist the State in meeting the goals of the State Energy Plan, which include obtaining 50% of energy generation from renewable sources by 2030 and significantly reducing greenhouse gas emissions. Other positive impacts of the Facility include diversification of energy supplies, new employment opportunities (both temporary construction employment and full-time jobs), and increased revenues to County and local tax bases, payments to the local hospitality industry, and purchase of local supplies and goods. In addition, the Applicant has attempted to minimize impacts to land associated with the Facility by limiting the disturbance to forested lands and wetlands to the maximum extent practicable. However, the construction and operation of the Facility may result in some environmental impacts as more fully described in the Application, including, but not limited to: impacts on terrestrial ecology, including avian and bat species; minor impacts to forested land, wetlands and agricultural lands; and impacts to people, including noise, traffic and visual impacts.

Pursuant to the Article 10 process, the Applicant filed a Preliminary Scoping Statement (PSS) on May 15, 2017 with the Siting Board. After the public comment period on the PSS, the Applicant prepared a reply to material comments that was submitted on July 7, 2017. On July 12, 2017, a pre-application conference to consider intervenor funding requests was held and the scoping stipulation process was ordered to commence. The Applicant is now ready to file an Application.

The Article 10 regulations outlining the required contents of the Application can be found at 16 NYCRR 1001.1 *et seq.* The Application includes, among other things: an analysis of the environmental setting of the Facility, a description of the Facility, including preliminary design drawings and related information; copies of reports, studies and plans submitted in support of the Application; and an assessment of impacts of construction and/or operation of the Facility relating to land use; consistency with State energy planning objectives, including climate change and renewable energy goals; public health and safety; terrestrial ecology, water resources and aquatic ecology, including avian and bat species and wetlands; communications, transportation and utilities; cultural, historical and recreational resources; visual, including shadow flicker; sound; electric magnetic fields; and impacts on the statewide electrical system.

Pursuant to the Article 10 process, this notice is being provided in accordance with 16 NYCRR 1000.7, and will be published at least three days prior to the filing of the Application. In addition, a copy of the Application will be served on the Chief Executive Officer of each municipality in which any portion of the Facility is located, as well as those persons and agencies enumerated in 16 NYCRR 1000.6.

Once an Application is filed and determined by the Siting Board to be complete, the Siting Board will schedule a public hearing on the Application. The Siting Board will also issue a notice of availability of application intervenor funds that are available to be used by parties to participate in formal review of the Application. A pre-hearing conference will be scheduled by the Hearing Examiner to identify intervenors, award intervenor funds, identify issues for the hearing, and establish a case schedule. Additional hearings regarding the application and project impact assessments will be scheduled by the Hearing Examiner as needed. After hearings, the stakeholders may brief their positions and the Hearing Examiner will issue a recommended decision upon which the Siting Board will base its decision. Article 10 requires that all

proceedings on the Application, including a final decision by the Siting Board, must be completed within 12 months of when the Application is determined to be complete.

Upon filing the Application, the Applicant will provide funding in the amount of \$101,400 to be disbursed by the Siting Board to municipalities and other local parties to help pay expenses, including attorneys and consultants, associated with participating in the Article 10 process during the application review phase. Fifty percent (50%) of these intervenor funds are reserved for municipalities. Following the filing of an Application, the Hearing Examiner or the Secretary will issue a notice of availability of application intervenor funds that provides a schedule and related information describing how interested members of the public may apply for application funds. Requests for application funds must be submitted to the Hearing Examiner within thirty (30) days after the issuance of the notice of the availability of application intervenor funds. Following the submittal of any intervenor funding requests, the Hearing Examiner may schedule a pre-hearing conference to consider fund requests.

The record of this proceeding, including the Application, may be examined during normal business hours at the Offices of the New York State Department of Public Service (DPS) at 3 Empire State Plaza, Albany, NY 12223; Atlantic Wind's Local Project Office in Lowville (7650 North State Street, Suite 1); and at the following public repositories: Pinckney Town Hall, 587 County Route 194, Copenhagen, NY 13626; Lowville Free Library, 5387 Dayan Street, Lowville, NY 13367; Rodman Public Library, 12509 School Street, Rodman, NY 13682. Libraries often have free internet access.

Contact Information

Atlantic Wind LLC
Walter Meisner
Avangrid Renewables
7650 North State Street, Suite 1
Lowville, NY 13367
Tel. No. (315)874-4231 or 1-844-308-4616 (toll free)
DeerRiverWind@avangrid.com

DPS Article 10 Coordinator
James Denn
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223
Tel. No. (518) 474-7080
james.denn@dps.ny.gov

The Application will also be available at the DPS website at (<http://www.dps.ny.gov/>). To access documents, go to "Search" on the top of the webpage and search using the Case Number 16-F-0267 or the direct link <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-F-0267&submit=Search> or by going to the Project-specific website maintained by the Applicant: <http://www.avangridrenewables.com/deerriver/>

File a Request for Notices

Any interested member of the public may file a request with the DPS Secretary to receive copies of all notices concerning the Project. Written requests should be sent to the DPS Secretary at secretary@dps.ny.gov or sent by mail to the following address:

Honorable Kathleen H. Burgess
Secretary to the Siting Board
NYS Board on Electric Generation Siting and the Environment
Empire State Plaza
Agency Building 3
Albany, New York 12223-1350

Company Detail

Company Name	ACLS DIRECT, LLC
Address	7839 MALTLAGE DR LIVERPOOL, NY 13090-2552
Contact Name	RON KIMBALL
Phone Number	(315)457-9333
Profit Indicator	P

PS Form 3607R - Mailing Transaction Receipt

Account Holder Account Number	1308547
Account Holder Permit Number	999
Account Holder Permit Type	PI
Account Holder CRID	5441333
Post Office of Permit	SYRACUSE NY 13220-9600
Post Office of Mailing	SYRACUSE NY 13220-9600
Post Office of Permit Cost Center	358360-0421
Post Office of Mailing Cost Center	358360-0421
Mailing Agent Name	ACLS DIRECT, LLC
Mailing Agent CRID	5441333
Mail Owner Name	Avangrid Renewables
Mail Owner CRID	21292463
JOB ID	DR010419
Customer Reference ID	Avangrid_DeerRiver_010419
CAPS Transaction Number	N/A
Class of Mail	First-Class Mail and First-Class Package Service
Processing Category	Letters (may include Postcards)
Postage Statement ID	328110400
Mailing Group ID	231245538
Mailer's Mailing Date	01/04/2019
Mailer Declared Total Pieces	372 pcs.
Mailer Declared Total Weight	20.9436 lbs.
Mailer Declared Weight of a single-piece	0.0563 lbs.
USPS Determined Total Pieces	372 pcs.
USPS Determined Total Weight	20.9436 lbs.
USPS Determined Weight of a single-piece	0.0563 lbs.
Total Number of Containers	1
Total Adjusted Postage	\$ 174.84
Payment Date and Time	01/04/2019 14:33
Payment Transaction Number	201900413330810M0
Adjustment Transaction Number	
Mailer Figures Adjusted?	No
Person authorizing adjustment Name	
Phone Number	
Acceptance Site Mailer ID	
Clerk Initials	SS1
Mail Arrival Date and Time	01/04/2019 14:33

Attachment '7'

Young / Sommer LLC

JEFFREY S. BAKER
DAVID C. BRENNAN
JOSEPH F. CASTIGLIONE
JAMES A. MUSCATO II
J. MICHAEL NAUGHTON
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COUNSELORS AT LAW

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www.youngsommer.com

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AMY S. YOUNG

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lbomyea@youngsommer.com

February 7, 2019

Hon. James A. Costello
Administrative Law Judge
NYS Department of Public Service
Empire State Plaza
Agency Building 3
Albany, NY 12223-1350

Hon. Daniel P. O'Connell
Administrative Law Judge
NYS Department of Environmental Conservation
Office of Hearings and Mediation Services
625 Broadway, First Floor
Albany, New York 12233-1550

Re: Case No. 16-F-0267: Application of Atlantic Wind, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the New York Public Service Law for the Deer River Wind Farm Project in the Towns of Pinckney and Harrisburg in Lewis County, with Interconnection in the Town of Rodman, Jefferson County, New York

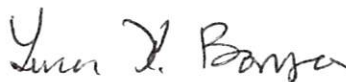
Dear Judges Costello and O'Connell:

We represent Atlantic Wind, LLC ("Atlantic Wind" or the "Applicant") in the above-referenced proceeding. On February 7, 2019, Atlantic Wind filed an Application under Public Service Law (PSL) Article 10 for the Deer River Wind Farm Project (the "Application"). The Application contains certain information which the Applicant asserts is confidential and should be protected from disclosure pursuant to the Siting Board's regulations. As such, please find enclosed the Comprehensive Brief required by 16 NYCRR § 6-1.4 providing the basis for the Applicant's assertion of confidentiality.

Copies of various documents for which the Applicant is seeking protection from disclosure are included with this letter. Certain materials that are either extremely bulky and/or were supplied to the appropriate agency staff separate from the above-referenced Application are not included with this submission. If you require copies of these documents in order to make the requested confidentiality determination, please let us know and we will supply them to you, unless specifically prohibited by applicable laws.

If you have any questions, please feel free to let us know.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James A. Muscato II".

James A. Muscato II

Laura K. Bomyea

Young/Sommer LLC

Attorneys for Atlantic Wind LLC

cc: Party List (*via DMM*)