

THE STATE OF NEW HAMPSHIRE

BEFORE THE

SITE EVALUATION COMMITTEE

DOCKET NO. 2012-01

**APPLICATION OF ANTRIM WIND ENERGY, LLC
FOR A CERTIFICATE OF SITE AND FACILITY**

**FIRST SUPPLEMENTAL PREFILED TESTIMONY OF
SEAN MCCABE AND ELLEN CRIVELLA**

AND PREFILED DIRECT TESTIMONY OF RUBEN SEGURA-COTO

ON BEHALF OF

ANTRIM WIND ENERGY, LLC

August 22, 2012

1 **Background and Qualifications**

2 **Q. Please state your name and business address.**

3 A. My name is Sean McCabe and my business address is 25 Braintree Hill Park,
4 Suite 200, Braintree, MA 02184. My qualifications have not changed from my January
5 31, 2012 prefiled testimony in this docket.

6 **Q. Please state your name and business address.**

7 A. My name is Ellen Crivella. My business address is 333 SW Fifth Avenue, Suite
8 400, Portland, OR 97204. My qualifications have not changed from my January 31,
9 2012 prefiled testimony in this docket.

10 **Q. Please state your name and business address.**

1 A. My name is Ruben Segura-Coto and my business address is 601 Fawcett Drive,
2 West Branch, Iowa 52358.

3 **Q. Who is your current employer and what position do you hold?**

4 A. I am Director, Post Sales Service at Acciona Windpower North America
5 (“AWP”). AWP is a direct subsidiary of Acciona Energy and an indirect subsidiary of
6 parent company Acciona.

7 **Q. Please provide background information about Acciona.**

8 A. Acciona is one of the largest corporations in Spain and a global leader in the
9 development and management of infrastructure, renewable energy, water and services.
10 Listed on the selective Ibex-35 stock exchange index, it is a benchmark for the market –
11 and has been named to the Dow Jones Sustainability World Index for the 5th consecutive
12 year. It was also named to the 2011 list of the 100 Most Sustainable Corporations in the
13 World. The Company was established over a century ago, employs more than 30,000
14 people, has a presence in more than 20 countries on five continents and had revenues of
15 approximately \$9 billion at the end of 2011. A direct subsidiary of Acciona, Acciona
16 Energy is the world’s largest non-utility energy operator devoted exclusively to
17 renewable energy sources with 8,255 MW in operation, of which 6,965 MW is wind
18 power. Acciona Energy is involved in wind turbine manufacturing as well as project
19 development, engineering and construction, wind farm operations and maintenance and
20 energy sales. AWP manufactures its proprietary wind turbine technology at its plant in
21 West Branch, Iowa and two plants in Spain. Today, over 2,600 Acciona Wind Turbines

1 are in operation in 13 different countries. AWP is committed to the quality of its
2 products and the health and safety of our employees and the communities where they
3 work. As part of this commitment, AWP is certified under ISO (International
4 Organization for Standardization) standards for quality management (ISO 9001),
5 environmental management (ISO 14001) and Occupational Health and Safety (ISO
6 18001).

7 **Q. Mr. Segura-Coto, please describe your responsibilities at Acciona.**

8 A. I am responsible for the operation, maintenance and technical support of the AWP
9 fleet of wind turbines in the USA and Canada, which consists of a total of 633 wind
10 turbine generators (“WTG”) in 2012. These responsibilities include wind turbines under
11 different AWP warranty terms as well as wind turbines outside the AWP warranty
12 coverage.

13 **Q. What are your background, experience and qualifications?**

14 A. I have worked in the energy industry since 2010. Prior to joining Acciona, I
15 held positions of increased responsibility in the aerospace maintenance and repair
16 organization (MRO) industry, from design engineering and flight testing, to engineering
17 and general management. My last appointment in aviation included the management of
18 an authorized service center with responsibility over maintenance and warranty
19 maintenance of corporate business jets and turbo props. More detailed information about
20 my background and experience is contained in my résumé which is provided as
21 Attachment RSC – 1.

1 **Purpose of Testimony**

2 **Q. What is the purpose of this testimony?**

3 A. The purpose of this testimony is to confirm that Antrim Wind Energy, LLC
4 (“AWE” or “the Applicant”) is seeking from the Site Evaluation Committee (“SEC” or
5 “Committee”) approval of the Acciona AW-116/3000 wind turbines described in AWE’s
6 application at pages 23 to 25, and in Appendix 5. Mr. Segura-Coto’s testimony will also
7 explain the role that AWP, the turbine manufacturer, will play in the operation of the
8 Project, and to describe the technical and managerial capabilities of Acciona to assure
9 operation of the Project. Finally, Mr. Segura-Coto will augment what is already in the
10 Application by describing specific public health and safety features of the Acciona AW-
11 116.

12 **Q. Are you familiar with the Project that is the subject of this proceeding?**

13 A. Yes, we are. Mr. McCabe is familiar with the Project by virtue of his
14 management positions with Westerly Wind, LLC, Westerly Antrim, LLC and Antrim
15 Wind Energy, LLC (“AWE”), as well as his role in providing day-to-day development
16 support and oversight to the Project. As a consultant to the Project, Ms. Crivella is
17 familiar with the Project based upon communications with representatives of AWE. Mr.
18 Segura-Coto is familiar with the Project based on his review of the size (in terms of
19 megawatts), location, terrain, estimated completion date and expected annual
20 performance of the turbines, typically known as the Availability Guarantee.

21

1 **Confirmation that Approval of Acciona Turbines is Being Sought**

2 **Q. Mr. Kenworthy's prefiled testimony filed January 31, 2012 in this docket**
3 **indicates at page 7 that AWE has not finalized its turbine selection. In light of that**
4 **statement, please explain why information about the Acciona wind turbines was**
5 **provided in AWE's Application?**

6 A. AWE hereby confirms that it is seeking a Certificate of Site and Facility
7 specifically for the AW3000/116 turbine, with Acciona as the initial contracted
8 operations and maintenance ("O&M") provider for at least the first five years of the
9 Project's operations.

10 While it remains true that AWE has not executed a definitive turbine supply
11 agreement with Acciona at this time, the lack of such an agreement prior to regulatory
12 approvals is not unusual in the U.S. wind industry. AWE has selected the AW3000/116
13 to present to the Committee for certification in order to demonstrate the Project's
14 satisfaction of the criteria set forth in RSA 162:H.

15

16 **Plan for Turbine Procurement**

17 **Q. Please explain why AWE has not secured a firm supply of turbines from**
18 **Acciona.**

19 A. It is common practice for project developers and sponsors in the U.S. wind
20 industry to design and permit projects without having executed a firm commitment to
21 purchase a specific turbine make and model. AWE asserts that, while this approach to

1 turbine procurement may be a departure from that of previous wind project applicants
2 before the SEC, it is the most appropriate turbine acquisition strategy for the Antrim
3 project. AWE believes this approach best reflects the dynamics of the current turbine
4 supply market and the appropriate sequencing of development tasks and project risk. In
5 the current over-supplied turbine market, it is normal for projects to enter into firm
6 turbine supply agreements when all major project permits and agreements (including off-
7 take) have been secured. These agreements are typically secured 12 months prior to
8 construction, and several months after final permit approvals have been obtained. To
9 remain competitive in a market where turbine prices have been falling, projects like
10 Antrim must be able to ensure access to competitively priced turbines with the objective
11 of delivering the lowest cost energy possible. AWE believes that entering into a turbine
12 contract prior to the issuance of an SEC certificate would be premature and could place
13 the Project at a competitive disadvantage.

14 **Q. If AWE's Application is granted and AWE later decides for valid commercial**
15 **reasons to use a turbine model different than the AW 3000/116 certificated by the**
16 **SEC, what steps will AWE take?**

17 A. AWE understands that any proposed change in turbine model (and therefore
18 operator) will require the review and approval of the SEC. AWE will work
19 collaboratively with the SEC, its counsel and the parties to this docket to provide
20 appropriate information and to support any required processes to enable the SEC to
21 review and approve a turbine model expeditiously.

1 **Role of Acciona**

2 **Q. How will the Antrim Wind Project be operated and maintained?**

3 A. As described in the McCabe and Crivella January 31, 2012 prefiled testimony in
4 this docket, AWE plans to operate the Project under an O & M contract with a third party
5 that reflects standard industry practices, with oversight provided by AWE personnel.
6 AWE hereby clarifies that it will utilize Acciona as the third-party service provider at the
7 Project for the first five years of operations, assuming that Acciona turbines are
8 ultimately installed at the Project. Thereafter, AWE expects either to extend Acciona's
9 agreement, or contract with another tier one third-party O&M provider to operate the
10 project. Examples of such tier one third-party providers of O&M services to wind
11 projects in the United States that work on behalf of project sponsors include: Upwind
12 Solutions, enXco, Outland Energy Services, and NAES.

13 **Q. Please describe Acciona's responsibilities for operating the Antrim Wind**
14 **Project.**

15 It is anticipated that Acciona Windpower will provide the following typical services
16 provided under an O&M services contract:

- 17 1. Routine Operation Activities:
- 18 • Monitoring, switching and reset operations as necessary for the normal operation
19 and maintenance of the Turbines on a 24/7 call-out basis;
 - 20 • Maintain incident logs for all outage events, curtailments, weather events,
21 SCADA System issues and Turbine issues; and

- 1 • Prompt notification to AWE designated representative of outages and expected
2 duration.
- 3 2. Routine Maintenance Activities:
- 4 • Performance of preventative maintenance tasks on the Turbines in accordance
5 with the Operating Manual; and
- 6 • Preparation of standard operations and maintenance reports.
- 7 3. Corrective Maintenance:
- 8 • Performance of all corrective maintenance tasks on any Turbines, central
9 monitoring and control systems, data acquisitions cards and remote control
10 software supplied by Acciona;
- 11 • Replacement and/or substitution of defective materials and components in any of
12 the Turbines, central monitoring and control systems, data acquisitions cards
13 and remote control software supplied by Acciona.
- 14 • Performance of the necessary tests or checks after repairing required to return
15 affected components and/or systems to service; and
- 16 • Preparation of incidental and emergency operations and maintenance reports.

17

18 **Technical and Managerial Capabilities**

19 **Q. Please describe Acciona's technical and managerial capabilities to assure**
20 **that the Antrim Wind Project is operated in continuing compliance with the terms**
21 **and conditions of any certificate that may be issued by the SEC.**

1 A. Acciona Windpower currently operates 1,315.5 MW of wind turbines across 12
2 projects that are connected to the grid in North America. It will have operational
3 responsibility for another 189 MW of wind turbines to be commissioned before the end
4 of 2012. Projects in AWP's North American fleet are located in Montana, North Dakota,
5 South Dakota, Illinois, Indiana, Oklahoma, New Brunswick, Canada, Oaxaca and
6 Cancun, Mexico and they range in size from 45 MW to 306 MW in a variety of terrains
7 and climates. In addition to local (on- site) O & M personnel, each project has 24/7
8 remote monitoring based in Chicago, Illinois to ensure the safe operation and compliance
9 with local grid requirements.

10 **Q. What is Acciona's track record with regard to the reliability, operation and**
11 **maintenance of its wind turbines? Please include statistics related to the number of**
12 **turbines Acciona operates, both for itself and third party sponsors.**

13 A. Acciona Windpower has an excellent track record with its Wind Turbine
14 technology. At the end of 2011, Acciona Windpower was responsible for operating and
15 maintaining approximately 3,700 MW of wind power throughout the world. Acciona
16 Windpower's proven design has superior availability across the global fleet achieving an
17 average fleet availability of 97.1% during the first 6 months post commissioning, 97.7%
18 during the first 12 months and an overall average of 98% availability. In 2011, Acciona
19 Windpower achieved 98.91% availability across the North American fleet (consisting of
20 1,315.5 MW in 12 projects) with an average fleet availability of 98.2% since the first
21 project was installed in 2007. These availability/reliability statistics speak to Acciona's

1 operational and maintenance capabilities. In addition, Acciona Windpower achieved an
2 OSHA lost time rate of 0.0 and a recordable injury rate of 2.8 in 2011 for US projects.
3 This is based on the formula for recordable injuries divided by total man-hours worked
4 and allows OSHA to compare Acciona's safety record to others in the industry.

5 **Q. Please describe how the AWE Project will be staffed, and the qualifications**
6 **of the personnel available to AWE to operate and maintain the Project.**

7 A. AWP operations and maintenance model includes on-site and off-site technical
8 resources, with local AWP supervision. AWP personnel are trained and qualified in their
9 respective areas of responsibility, and includes Technicians, Technical
10 Advisors/Specialists, Operations Engineers and Managers for different disciplines. A
11 project such as Antrim Wind will require a permanent presence at the site of between 3
12 and 4 technicians with different levels of responsibility. In addition to these on-site
13 personnel, AWP provides 24/7 monitoring via its control center in Chicago, Illinois,
14 allowing for real time remote monitoring and dispatch capabilities. Lastly, Acciona's
15 main offices provide support to the Project with technical specialists for remote
16 troubleshooting or on-site corrective actions.

17 **Q. In your opinion, does AWE, through its relationship with Acciona, possess**
18 **the technical and managerial capabilities to assure that the operation of the wind**
19 **turbines will be in continuing compliance the terms and conditions of a certificate**
20 **of site and facility that may be issued by the Committee?**

1 A. Yes. Based on our knowledge of and experience in the wind power industry,
2 Acciona's capabilities, and AWE's plans for the construction, operation and maintenance
3 of the Project, it is our opinion that AWE has the technical and managerial capabilities to
4 assure that the AW3000/116 wind turbines in the Project will be operated in compliance
5 with the terms and conditions of a certificate of site and facility that may be issued by the
6 Committee.

7 **Public Health and Safety Issues**

8 **Q. Please describe specific features of the Acciona turbines or other information**
9 **about Acciona that demonstrates that the Project will not have an unreasonable**
10 **adverse effect on public health and safety?**

11 A. Acciona Windpower designed its turbines from the owner and operator point of
12 view with safety as the main focus. Each wind turbine comes standard with a 2-person
13 lift, hub access from inside the nacelle and a larger, more ergonomic nacelle design to
14 allow technicians ease of movement from within to allow more efficient maintenance. In
15 addition, the AW3000/116 turbine does not have a transformer inside the nacelle, which
16 further reduces the potential risk of equipment damage in the unlikely event of a
17 transformer fire. The Acciona AW3000/116 wind turbines in the AWE Project will also
18 be equipped with a Fire Detection and Alarm system which is integrated within the
19 Project's Supervisory Control and Data acquisition ("SCADA") system. The SCADA
20 system monitors all of the major components to ensure that they are operating within
21 their design parameters and communicates directly with Acciona's Remote Operations

1 Center (“ROC”). In the event that any operating parameter exceeds a normal threshold
2 setting, the SCADA system puts the turbine into pause (stopped) mode. Some of the
3 parameters which are continuously measured are temperature, oil pressure, abnormal
4 vibrations, overspeed, oil condition, grid disturbance, motor protections, braking issues,
5 blade angle, loss of communication and yaw limits. Acciona’s US ROC is located in
6 Chicago, Illinois and is staffed 24/7 with an extremely knowledgeable and experienced
7 team. This ROC has the ability to remotely reset approximately 60% of all WTG faults
8 and return the WTGs back to safe operations. The ROC also has direct communication
9 and interaction with site personnel as well as grid operators, which facilitates safe
10 operation in the event of any curtailment or grid outage.

11 **Q. Do you have anything further to add to this testimony?**

12 A. No, not at this time.

13 913548_1

RUBEN SEGURA-COTO

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Davenport, IA 52804

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EXPERIENCE

Acciona Windpower NA, West Branch, IA, U.S.A. 2010 to Present
A sustainable wind power company, leader in the design, manufacturing, installation and maintenance of utility size wind turbines. Acciona's group of North American companies are subsidiaries of Acciona S.A., a 100-year-old, multi-billion-dollar global company with nearly 35,000 employees that operates on five continents in 30 countries and have pioneered renewable energy solutions for nearly 20 years.

Director, Post Sales Services (2011-Present)

Provide leadership and guidance to the Post Sales Department to meet and exceed contractual obligations with our valued customers.

- Lead negotiations and award O&M contracts to ensure compliance with all contractual obligations.
- Participate in the negotiation of warranty and support agreements; lead efforts to follow-on contracts as applicable.
- Responsible for the timely and cost effective support of our client wind farms through effective coordination with onsite teams and other company resources.
- Manage the post sales department, including functional managers, engineers and technicians.
- Perform analysis of operation, maintenance and warranty against budget.
- Supply activity reports as required by company processes and contractual obligations.
- Ensure the company maintains an accurate spare and warranty parts inventory.
- Key contributor to continuous improvement of quality activities related to the wind turbine performance and availability.
- Develop budgets and capital expenditure plans.
- Represent the company and lead frequent communication with customers to gauge satisfaction and support results.
- Participate on company safety committees to ensure compliance with regulations, policies and procedures.

Customer Account Manager (2010-2011)

Primary business contact for the client, and responsible for customer satisfaction.

- Responsible for all client communications and conflict resolution.
- Review O&M contracts to ensure quality standards and customer expectations are met.
- Manage contracts and contract renewals for new work from existing clients.
- Manage all special operations, corrective actions and retrofits and communicates them to the customer.
- Develops and analyzes KPIs to monitor the projects and control deviations.
- Pursues opportunities for account growth and new business development.
- Communicates the client's goals and represents the client's interests to the team.

Elliott Aviation, Moline, IL, U.S.A.

2005 to 2010

A diversified aviation services company with four locations in the Midwest and known as a world-class provider of comprehensive and customer-focused solutions for business aviation.

VP General Manager (2007-2010)

Provide leadership, communication and direction to all technical service departments at the Moline operation unifying them to achieve company goals and objectives.

- Developed and maintained an efficient, effective and profitable technical service division by energizing the customer base, hiring and training key personnel, developing new business areas, and overseeing the work flow of the technical services division.
- Appointed **Interim VP of Sales and Marketing** to restructure sales efforts, focus into niche territories, and redefine products/differentiators within market segment.
- Bridged communications between operations and sales for efficient product development, and life cycle control.
- Controlled over quoting, contracts and accounts management to safeguard company strategic and financial goals.
- Actively participated and contributed to the Senior Leadership Team for strategic planning and development of value propositions.
- Maximized control over resources and final product quality control to reduce financial losses. Turned financial net losses into net profit without relevant revenue increase.
- Created management stability and initiated an employee development culture to reduce employee turnover.
- Reassessed low and mid-management skill sets to match company's operational needs with available talent. Created an encouraging environment for employees to share their knowledge and accomplishments versus seniority and empowered people to assess their direct reports and supervisors in a non-threatening environment.
- Improved work orders and production processes by implementing a metrics system that increased profitability margin on work orders. This was achieved through controlling effective billed rates and available manpower.

Central Engineering Manager (2005-2007)

Trained, supervised, and managed the Central Engineering department. Provided technical support to the sales staff, modification departments and the Director of Business Development.

- Created a company-wide design and operations standards for aircraft modifications.
- Presented a quarterly written report of project status and recommendations for future developments to the President, VPO, CFO, and Director of Avionics Business Development.
- Prepared monthly status and authorization for development report for the executive staff.
- Delivery of over 25 Supplemental Type Certificate (STC) aircraft modifications over a period of two years, which contributed to a full recovery of burdened costs in the department.

Midcoast Aviation, Cahokia, IL / Perryville, MO, U.S.A.

2001 to 2005

Senior Avionics Engineer / Project Lead, (2004-2005)

Provided oversight of Avionics design and installation projects, defined resources, developed and maintained a schedule, coordinated support between several departments, provided customer interface, and developed recovery plans if needed. Responsible for project cost and schedule.

- Generated supporting documentation such as electrical load reports, test procedures and compliance reports and coordinated with vendors for new product definition and requirements.

Avionics Engineer / Flight Test Engineer (2001-2004)

Generated engineering drawings for aircraft avionics equipment integration and cabin electrical equipment interface. Provided technical support to production and sales departments for bidding process. Complete Reduced Vertical Separation Minimums (RVSM) Supplemental Type Certificate (STC) electrical design and flight test for Raytheon HS.125-700A aircraft.

Saint Louis University, St. Louis, MO, U.S.A.

1998 to 2001

Tutoring Center

Tutor (Spanish, Physics, Calculus, Electronics); Spanish Teaching Assistant (SP-300/400 levels).

Spanish Air Force, Leon-Torrejon, Spain, E.C.

1993 to 1996

Armament Specialist (Retired)

M61A1 Vulcan cannon overhaul trainer. AIM-9P/M "Sidewinder" missile overhaul trainer. CLAEX (research and development Air Force center) data acquisition technician.

EDUCATION

Boeing Institute of International Business

Saint Louis University, Saint Louis, MO, U.S.A.

Executive MBA – International Business, Aug 2002 - May 2004 (3.443 Overall GPA).

Parks College of Aeronautics and Engineering

Saint Louis University: Saint Louis, MO, U.S.A.

BS in Aeronautics – Avionics Engineering, Sept 1997 - May 2001 (3.221 Overall GPA).

SKILLS

- Multicultural background with fluency in Spanish and English
- International Business, Management Strategies, Financial Management Tools, Marketing Research and Analysis, and Managerial Accounting Methods
- Gulfstream, Falcon, Bombardier and Raytheon aircraft systems expertise
- Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA) liaison expertise
- Expert in Autodesk Design Suite and Microsoft Office XP suite

OTHER ACTIVITIES AND AWARDS

- Executive Education Diploma - Notre Dame / St. Ambrose University (60.0 hours)
- Collins/Airshow Tailwind 500 Installation Course (40.0 hours)
- Rockwell Collins FDS-2000 Familiarization Course (16.0 hours)
- Honeywell General Avionics Installation Refresher Course (8.0 hours)
- Human Factors in Aircraft Maintenance Workshop (16.0 hours)
- Federal Aviation Administration (FAA) Silver Award. 2002