

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC
FOR A PERMIT FOR A WIND ENERGY FACILITY IN BON HOMME, CHARLES MIX,
AND HUTCHINSON COUNTIES, SOUTH DAKOTA, FOR PREVAILING WIND
PARK ENERGY FACILITY**

SD PUC DOCKET EL18-026

**PRE-FILED SUPPLEMENTAL DIRECT TESTIMONY OF PETER PAWLOWSKI
ON BEHALF OF PREVAILING WIND PARK, LLC**

August 10, 2018

1 **I. INTRODUCTION AND QUALIFICATIONS**

2
3 **Q. Please state your name, employer, and business address.**

4 A. My name is Peter Pawlowski. I am Vice President, Wind, at Sustainable Power
5 Group, LLC ("sPower"), 2180 South 1300 East, Suite 600, Salt Lake City, Utah
6 84106.

7
8 **Q. Please describe your educational and professional background.**

9 A. In my current position, I am responsible for sPower's wind business plan and
10 implementation.. I have held this position since 2017. In 2016, I was a project
11 manager with sPower, where I oversaw the construction of the 80-megawatt Pioneer
12 Wind Park in Glen Rock Wyoming. Prior to that, I worked with two renewable
13 energy companies developing wind projects. Overall, I have approximately 20 years
14 working in energy development. I have a Bachelor of Science in Aerospace
15 Engineering from the University of Maryland, College Park.

16
17 **Q. What is your role with respect to the Prevailing Wind Energy Project**
18 **("Project")?**

19 A. I supervise the sPower team working on the Project and am directly responsible for
20 planning and implementation of all aspects of Project development.

21
22 **Q. Did you previously provide prefiled testimony in this docket?**

23 A. No. However, as noted below, I am adopting James Damon's Direct Testimony as
24 my own going forward, since Mr. Damon recently left sPower.

25
26 **II. PURPOSE OF TESTIMONY**

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28 **Q. What is the purpose of your Direct Testimony?**

29 A. The purpose of my testimony is to provide updates to certain information in the
30 Application. Specifically, I will:

- 31
- Discuss the current status of local permitting for the Project;

- 32 • Provide an update on turbine model selection for the Project; and
- 33 • Describe commitments the Applicant is making with respect to the Project.

34
35 In addition, I am adopting Mr. Damon's Direct Testimony and am sponsoring the
36 associated Application sections with the exception of Section 20.1.2.3, Property
37 Value Impacts, which is being addressed by Michael MaRous in his supplemental
38 direct testimony. Mr. MaRous is also supporting Appendix P (2009 Berkeley
39 Property Values Study) and Appendix Q (2013 Berkeley Property Values Study).

40

41 **Q. What exhibits are attached to your Supplemental Testimony?**

42 A. The following Exhibits are attached to my Supplemental Testimony:

- 43 • Exhibit 1: Resume
- 44 • Exhibit 2: Example of a Federal Aviation Administration ("FAA") Determination
45 of No Hazard for a Project turbine location

46

47 **III. LOCAL PERMITTING UPDATE**

48

49 **Q. Please provide an update regarding the status of the Project's local permitting.**

50 A. Since submitting the Application in May 2018, Prevailing Wind Park has continued to
51 pursue the local permits that will be required for the Project. An update on the
52 permitting status in each county where Project facilities are proposed follows:

- 53 • Bon Homme: Prevailing Wind Park submitted its application for a wind energy
54 system approval to the Bon Homme County Board of Commissioners on
55 August 2, 2018, and expects a decision on that application in August 2018.
- 56 • Hutchinson: Prevailing Wind Park plans to submit applications for conditional
57 use permits for the Project to Hutchinson County in mid-August 2018.
- 58 • Charles Mix: Charles Mix County does not currently have a zoning ordinance,
59 but does issue building permits. Prevailing Wind Park received building
60 permits for the Project in July 2018. Prevailing Wind Park submitted an
61 affidavit making setback and other commitments for the Project facilities
62 located in Charles Mix County. The Charles Mix County Board of

63 Commissioners formally accepted the affidavit at its meeting on August 9,
64 2018 noting that the commitments were responsive to the county's concerns.
65 In addition, Prevailing Wind Park will be seeking appropriate approvals this fall from
66 Yankton County for a substation and portion of the 115 kV transmission line that will
67 interconnect the Project with the transmission system.

68

69 **IV. TURBINE MODELS**

70

71 **Q. Has Prevailing Wind Park selected the turbine model it will use for the Project?**

72 A. Yes. Prevailing Wind Park has selected the GE 3.8-137 wind turbine model for the
73 Project.

74

75 **Q. At the July 12, 2018 public input hearing, some members of the public**
76 **expressed concern over the height of the proposed turbine models being**
77 **considered for the Project. Do you have a response?**

78 A. Yes. I understand that some commenters expressed concern regarding the height
79 of the turbine models under consideration for the Project. However, it is important to
80 understand that the Project has been designed to comply with all applicable
81 requirements, including setbacks, noise, shadow flicker, and FAA requirements.
82 Therefore, while the turbines may be taller than other turbines in the area, they must
83 meet the same – or even more stringent – requirements.

84

85 **Q. Has Prevailing Wind Park sought FAA review and approval of the proposed**
86 **turbine locations accounting for the height of the proposed turbine model?**

87 A. Yes. Prevailing Wind Park filed Notices of Proposed Construction (Form 7460-1)
88 with the FAA for all wind turbine and permanent meteorological tower locations. In
89 accordance with its requirements for structures of the height of the proposed turbine,
90 on May 17, 2018, the FAA issued a public notice advising that it was undertaking an
91 aeronautical study that includes all 63 proposed turbine sites. The notice provided a
92 comment period through June 23, 2018, and stated:

93

94 Preliminary FAA study indicates that the above-mentioned
95 structure would:

- 96 • have no effect on any existing or proposed arrival,
97 departure, or en route instrument flight rules (IFR)
98 operations or procedures.
- 99 • not exceed traffic pattern airspace.
- 100 • have no physical or electromagnetic effect on the
101 operation of air navigation and communications
102 facilities.
- 103 • have no effect on any airspace and routes used by
104 the military.

105
106 After its study and the comment period, on June 28, 2018, the FAA issued a
107 Determination of No Hazard to Air Navigation (“DNH”) for each of the proposed
108 turbine sites. An example DNH is attached as Exhibit 2.

109 110 **V. AIRCRAFT DETECTION LIGHTING SYSTEM**

111 112 **Q. What is ADLS?**

113 A. ADLS involves the installation of radar units around the perimeter of a wind project.
114 So long as the radar does not detect an aircraft it sends a signal to the wind turbine
115 lighting telling them to stay off. When the radar detects aircraft, it stops sending the
116 stay off signal and the wind turbine lighting activates. At other times, the wind
117 turbine lighting remains off. ADLS continues to be a relatively new technology, and
118 use of ADLS at a wind project requires FAA approval. sPower, under my direction,
119 installed the first ADLS system on the Pioneer Wind Park in Wyoming which became
120 operational in October 2016. As I noted during my presentation at the public input
121 hearing, Prevailing Wind Park intends to install ADLS on the Project, provided that
122 the FAA approves the use of this technology for the Project.

125 **VI. OTHER PROJECT COMMITMENTS**

126

127 **Q. Is Prevailing Wind Park willing to make other commitments related to the**
128 **design, construction, and operation of the Project?**

129 A. Yes. After reviewing the permit conditions the South Dakota Public Utilities
130 Commission imposed on the Dakota Range Project in Docket No. EL 18-003,
131 Prevailing Wind Park has determined that it is generally willing to accept the same
132 permit conditions for this Project. We plan to coordinate with Commission Staff to
133 develop a specific list of conditions to propose at the evidentiary hearing, but I will
134 highlight a few specific commitments:

- 135 • Prevailing Wind Park is committed to funding an escrow account to set aside
136 funds for decommissioning that is based on the decommissioning cost
137 estimate set forth the Decommissioning Cost Analysis provided with the
138 Supplemental Direct Testimony of Daniel Pardo.
- 139 • Prevailing Wind Park is committed to having a public liaison officer appointed
140 for the Project.
- 141 • Prevailing Wind Park is committed to addressing potential blade icing
142 concerns via the same methods outlined in paragraph 40 of the Dakota
143 Range Permit conditions.
- 144 • As noted above, Prevailing Wind Park is committed to installing ADLS on the
145 Project, provided that the FAA approves the use of this technology for the
146 Project.

147

148 **VII. CONCLUSION**

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150 **Q. Does this conclude your Supplemental Direct Testimony?**

151 A. Yes.

152

153 Dated this 10th day of August, 2018.

154

155

156

157 Peter Pawlowski

A handwritten signature in blue ink, appearing to read "Peter Pawlowski", is written over a horizontal line. The signature is stylized and cursive.

EXPERIENCE

2016– Present

Sustainable Power Group (sPower)Salt Lake City, Utah *Vice President, Wind 2017 – Present*

- Responsible for the company's wind development
- Responsible for building out the wind pipeline through M&A and greenfield development
- Responsible for the development of all wind projects

Salt Lake City, Utah *Wind Project Manager 2016*

- Executed the construction of Pioneer Wind Park in Glen Rock Wyoming including TSA, O&M, EPC and all other commercial agreements

2011 – 2015

New Dimension Energy Company (NDEC) Subsidiary of Ogin, Inc.Waltham, Massachusetts *Director, Business Development*

- Responsible for the company's California business plan and focus for new wind turbine technology
- Created the business plan for NDEC that was designed for the commercialization of a new shrouded wind turbine technology
- Lead role in the business plan for NDEC capital raise of \$50 million
- Led repowering and designed the strategy of the Alameda County project including the acquisition of AES SeaWest Power Resources in Alameda CA
- Led the submission and selection of PPAs in California including bilateral negotiations.
- Provided development support and expertise for UK turbine deployment

2000 – 2011

Competitive Power Ventures, Inc., (CPV) Silver Spring, Maryland*Director 2006 – 2011*

- Responsible for renewable development in California, Pacific Northwest, Nevada, Colorado and the PJM RTO area.
- All aspects of development from conception to construction including: commercialization opportunities; permitting; community relations; regulatory issues on the state level; equipment and EPC contracts.
- Determined strategy, site selection and review of over 300 PV sites in CA.
- Responsible for development of two IL wind farms totaling 300 MW.
- Project development duties; negotiating with local officials, regulatory bodies and landowners to design an economically and politically viable project; directing contractors to design a viable project
- Responsible for equipment, construction and PPA negotiation
- Responsibility for project acquisition, site and market selection.

Manager 2004 – 2006

- Project management of an existing fossil development project in Virginia. 650 MW
- Led efforts to submit a successful bid to the PG&E fossil RFP for the CPV Colusa project while acquiring the site and establishing the development team. 600 MW

EDUCATION**University of Maryland, College Park, Maryland***B.S. in Aerospace Engineering May 2000*



Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2018-WTE-3756-OE

Issued Date: 06/28/2018

Peter Pawlowski
 S Power
 2180 South 1300 East
 Salt Lake City, UT 84106

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Wind Turbine T17
Location:	Avon, SD
Latitude:	43-06-32.78N NAD 83
Longitude:	98-05-05.84W
Heights:	1719 feet site elevation (SE) 590 feet above ground level (AGL) 2309 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

At least 10 days prior to start of construction (7460-2, Part 1)
 Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 12/28/2019 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before July 28, 2018. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on August 07, 2018 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Airspace Policy Group via telephone – 202-267-8783.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. This determination is valid for coordinates within one (1) second latitude/longitude and up to the approved AMSL height listed above. If a certified 1A or 2C accuracy survey was required to mitigate an adverse effect, any change in coordinates or increase in height will require a new certified accuracy survey and may require a new aeronautical study.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

Additional wind turbines or met towers proposed in the future may cause a cumulative effect on the national airspace system. All information from submission of Supplemental Notice (7460-2 Part 2) will be considered the final data (including heights) for this structure. Any future construction or alteration, including but not limited to changes in heights, requires separate notice to the FAA.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be

Pawlowski Supplemental Direct Testimony, Exhibit 2
used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

If we can be of further assistance, please contact Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-3756-OE.

Signature Control No: 362188474-368945159

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2018-WTE-3756-OE

Abbreviations:

AGL, Above Ground Level

AMSL, Above Mean Sea Level

ASN, Aeronautical Study Number

CFR, Code of Federal Regulations

IFR, Instrument Flight Rules

NM, Nautical Mile

VFR, Visual Flight Rules

The proposed structures (Wind Turbines) would be located approximately 6.89 - 14.77 NM northeast - east of the Airport Reference Point for the Wagner Municipal Airport (AGZ), Wagner, SD. The ASNs with coordinates, AGL heights, and AMSL heights are as shown on page one. These would exceed the obstruction standards of 14 CFR Part 77 as follows:

Section 77.17(a)(1): by 91 feet; A height that exceeds 499 feet AGL.

In order to facilitate the public comment process, the studies were circularized on May 17, 2018 under ASN 2018-WTE-3741-OE to all known aviation interests and to non-aeronautical interests that may be affected by the proposal. No letters of objection were received as a result of the circularization.

Aeronautical study disclosed that the proposed structures would have no effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposed structures would have no effect on arrival or departure VFR operations or procedures. The proposed structures would be beyond traffic pattern airspace; therefore, they would not conflict with airspace required to conduct normal VFR traffic pattern operations at AGZ or any other known public use or military airports. At 590 feet AGL, the structures would penetrate altitudes commonly used for en route VFR flight, however no information was received to indicate they would be located within any known regularly used VFR routes. Therefore, they would not have a substantial adverse effect on en route VFR flight operations.

The proposed structures would be appropriately obstruction marked/lighted to make them more conspicuous to airmen should circumnavigation be necessary.

The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on any air navigation facility and would not be a hazard to air navigation providing the conditions set forth in this determination are met.

