

**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 EL 18-026

**PRE-FILED SUPPLEMENTAL DIRECT TESTIMONY OF DANIEL PARDO
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 Daniel Pardo, and I work for DNV GL, with a business address of 333
5 SW 5th Ave, Suite 400, Portland, Oregon 97204. I work at our office location with
6 an address of 4100 rue Molson, suite 100, Montreal, H1Y 3N1, Canada.

7

8 **Q. Briefly describe your educational and professional background.**

9 A. I have a Master of Science in Wind Energy from Danmarks Tekniske Universitet
10 and a Bachelors of Engineering in Mechanical Engineering from the Universidad
11 de Los Andes. I have 13 years of practical experience in renewables. In my
12 current position, I provide technical advice on renewable energy projects to
13 developers on topics such as feasibility studies, technology selection, and
14 decommissioning assessments. A copy of my statement of qualifications is
15 attached as Exhibit 1.

16

17 **II. OVERVIEW**

18

19 **Q. Please describe your familiarity with the Prevailing Wind Park Project**
20 **(“Project”)?**

21 A. DNV GL prepared the Decommissioning Cost Analysis attached as Exhibit 2 to my
22 testimony.

23

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

25 A. The purpose of my Supplemental Direct Testimony is to provide information
26 regarding estimated decommissioning costs.

27

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

29 A. The following exhibits are attached to my Supplemental Direct Testimony:

30

- Exhibit 1: Statement of Qualifications.

31

- Exhibit 2: Decommissioning Cost Analysis.

32

33 **III. DECOMMISSIONING COST ESTIMATE**

34

35 **Q. Could you provide DNV GL's per turbine decommissioning cost estimate**
36 **identified in the Decommissioning Cost Analysis, and explain the basis for**
37 **that estimate?**

38 A. Yes. DNV GL's decommissioning cost analysis for the Project includes the
39 disassembly, removal, and disposal of wind turbines and other associated Project
40 infrastructure. The results are presented for two scenarios: one where partial
41 resale of turbine major components occurs and another scenario where it does
42 not. For the partial resale scenario, DNV GL estimates the decommissioning cost
43 to be \$13,790 per turbine. For the scenario without partial resale, the
44 decommissioning cost is estimated to be \$51,540 per turbine.

45

46 The DNV GL decommissioning cost analysis thoroughly explains the methodology
47 for its decommissioning cost conclusions. Additionally, the results presented in
48 DNV GL's cost analysis study use conservative assumptions.

49

50 **Q. Could you discuss the accuracy of the decommissioning cost estimate**
51 **provided in your report?**

52 A. The report contains DNV GL's most accurate estimate based on our engineering
53 judgement, market knowledge and Project-specific information. Our
54 decommissioning cost analysis is based on conservative assumptions. Further,
55 DNV GL participates in the project financing for approximately 75 percent of all
56 wind projects financed throughout North America. This extensive experience with
57 financing of wind projects provides DNV GL with a comprehensive understanding
58 of the processes and costs associated with construction, which are very similar to
59 those involved in decommissioning.

60

61 **Q. Please explain the assumptions used in the cost analysis.**

62 A. As noted above, the results presented in DNV GL's cost analysis study use
63 conservative assumptions. Some of these assumptions are: all access roads will
64 be decommissioned, use of a conservative distance from the Project to
65 recycling/salvage facilities, and a width of 16 feet for all access roads. For the
66 partial resale scenario, conservative assumptions have also been made. These
67 assumptions include: only major components that are five years or younger can
68 be sold (at a fraction of the original price), and medium-grade materials, such as
69 small motors and medium-gauge cabling, would not be resold. Thus, DNV GL's
70 analysis provides a conservative decommissioning cost estimate based on a
71 specified and appropriate methodology.

72

73 **Q. Could you explain the role of partial resale and salvage value in your per**
74 **turbine decommissioning cost estimate for the Project?**

75 A. Yes. The study assumes that some of the major components can be sold after
76 they have been decommissioned. The resale value of these components
77 constitutes potential income that would offset the costs of decommissioning. The
78 study also assumes that some material can be sold as scrap and, thus, the
79 salvage value would also offset a portion of the decommissioning costs.

80

81 **Q. For what point in time is the cost estimate calculated? In other words, when**
82 **is it assumed that the decommissioning costs for the Project would be**
83 **incurred relative to when the Project becomes operational?**

84 A. For the analysis, decommissioning is anticipated to start soon after the end of the
85 Project's operating life (assumed to be 30 years for purposes of this study).
86 However, the costs are calculated in 2018 dollars.

87

88 **IV. CONCLUSION**

89


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

91 A. Yes.

92

93 Dated this 10th day of August, 2018.

94



95

96 Daniel Pardo

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