

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY ENGIE NORTH AMERICA, INC. FOR A
PERMIT FOR A WIND ENERGY FACILITY IN HYDE COUNTY, SOUTH DAKOTA, FOR
TRIPLE H WIND FARM

SD PUC DOCKET EL _____

PRE-FILED DIRECT TESTIMONY OF CASEY WILLIS
ON BEHALF OF ENGIE NORTH AMERICA, INC.

February 5, 2019



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1 Q. **Please state your name, employer and business address for the record.**

2 A. My name is Casey Willis and I am a Senior Project Developer with Engie North America, the
3 owner of Triple H Wind Project, LLC. My office location is 3760 State Street, Suite 200, Santa
4 Barbara, CA 93105

5 Q. **Briefly describe your educational background.**

6 A. I have two Bachelor of the Arts degrees in Environmental Studies and Geography,
7 respectively, from the University of California, Santa Barbara, a Master's Degree in City and
8 Regional Planning (MCRP) from California Polytechnic State University, San Luis Obispo and a
9 Master of Business Administration (MBA) from California State University, Channel Islands. I
10 have 18 years of experience in renewable energy development, project entitlements/permitting,
11 and environmental review. I have been involved in the successful development of multiple
12 utility scale wind energy projects across the plains and Midwest. My work involves the
13 oversight and management of the development of the Triple H Wind Project.

14 Q. **Briefly describe your professional experience.**

15 A. I have been employed in renewable energy development for the past 12 years. Prior to
16 the that time, I worked as an environmental consultant.

17 Q. **Have you attached a resume or CV.**

18 A. Yes, my resume is attached.

19 Q. **Have you previously submitted or prepared testimony in this proceeding in South
20 Dakota?**

21 A. No, I have not.

22 Q. **What is the purpose of your direct testimony?**

23 A. Provide clarification and confirmation of information related to the permit application and

24 the overall development of the Triple H Wind Project.

25 **Q. Please give us an overview of your involvement in the proposed project?**

26 A. I am currently the lead developer on the Triple H Wind Project. The Project was originally
27 managed by another developer when it was in an earlier stage of development, but I took of the
28 responsibilities in the fall of 2017 when the prior developer went on maternity leave.

29 **Q. Which sections of the application are you sponsoring with your testimony?**

30 A. I'm responsible for all or portions of Sections 1-5, 15, 17-19, and 21-22.

31 **Q. Please Provide an overview of the location of the project?**

32 A. The Project is located entirely within Hyde County in the Townships of Eagle, Chapelle,
33 Highmore and Holabird, approximately 3.2 miles southwest of Highmore. The Project will be
34 located on mostly privately held land within a 27,247.5-acre Project Area.

35 **Q. What is covered by the application submitted for the Triple H Wind Project?**

36 A. Triple H Wind Project, LLC respectfully requests the approval of an Energy Facility
37 Permit to construct and operate the Triple H Wind Project from the South Dakota Public Utilities
38 Commission. The total installed capacity of the Project is proposed to be 250.24 megawatts
39 (MW). The application includes the requested approval of 103 locations, of which 92 will be
40 constructed. A single wind turbine model produced by General Electric is proposed. The extra
41 locations are needed at this time to account for the loss of some locations that may be deemed
42 non-constructible due to further geotechnical evaluations/limitations, engineering/design, wind
43 optimization and title encumbrances that be identified through final development of the project
44 prior to construction.

45 Project components will include up to 92 GE 2.72 MW-116 wind turbine generators,
46 temporary/permanent accessing roads, 34.5 kilovolt (kV) underground electrical collector lines,
47 project substation, interconnection substation, permanent met tower, and an O&M facility.
48 Additional temporary construction areas, including crane paths, public road improvements,
49 laydown yard/staging area and concrete batch plant (s) (as needed). The Project will
50 interconnect to the high-voltage transmission grid via the Leland Olds to Fort Thompson 345 kV
51 transmission line, which crosses the Project Area.

52 **Q. What is the purpose of the facility and why is it needed?**

53 A. The purpose of the Project is to generate electricity via wind power to supply the needs
54 required for contracts with Triple H. Triple H has entered into two 30-year power purchase
55 agreements (PPA), one with Walmart for 150 MW and one for 48 MW with a confidential
56 institutional buyer. The remaining 52 MW will be sold on a merchant basis. Recent analysis has
57 consistently shown that wind energy is one of the most cost-effective electricity source for
58 customers, making it a desirable investment. New wind energy facilities are less expensive to
59 construct than new conventional energy sources, even without the existing production tax credit
60 program. This is demonstrated by the PPAs that have been executed for the Project.

61 **Q. What are the beneficial attributes of the project?**

62 A. From a purely economic standpoint, the approximately \$300 million-dollar investment
63 associated with the Triple H Wind Project would provide funding to the State of South Dakota,
64 Hyde County, local school district and to a revenue source to landowners participating in the
65 project. Rural landowners and farmers on whose land the Project is listed will receive annual
66 lease payments for each turbine sited or operational payments for land that does not receive a

67 turbine on their properties. It is estimated that the Project will generate a total of approximately
68 \$30 million dollars in property taxes over the 25-year life of the Project. Of this total, the Project
69 would generate approximately \$7.5 million dollars to the Highmore-Harrold School District in
70 the first nine years of operation as confirmed based on consultations with the South Dakota
71 Revenue Department and approximately \$300,000 annually to Hyde County. The Project will
72 provide numerous local and regional indirect economic benefits such as increased use of
73 services, suppliers and generation of additional sales taxes as well.

74 The project area is principally used for agricultural operations and cattle ranching. Given
75 the fairly small footprint required for the Project that would be proposed within the properties
76 under lease, the Project would be compatible with ongoing farming operations.

77 The Project is expected to employ approximately 200 temporary construction workers
78 during an estimated peak construction period to support Project construction. It is likely that
79 general skilled labor is available in the surrounding counties or the state to serve the basic
80 infrastructure and site development needs of the Project. During operation the project would
81 employ approximately 17-20 employees full time.

82 **Q. Please provide a description of the proposed decommissioning plan for TripleH?**

83 The anticipated Project life is approximately 25 years beyond the date of initiating
84 commercial operation. At the end of commercial operation, Triple H will be responsible for
85 removing wind facilities and the turbine foundations to a depth of four feet below grade. In this
86 case, a decision may be made on whether to continue operation with existing equipment or to
87 retrofit the turbines and power system with upgrades based on newer technologies.

88 Triple H will be responsible for all costs to decommission the Project and associated
89 facilities. The cost to decommission will depend upon the prevailing rates for salvage value of
90 the equipment and labor costs. Because of the uncertainties surrounding future decommissioning
91 costs and salvage values, Triple H will review and update the cost estimate of decommissioning
92 and restoration for the Project every five years after Project commissioning pursuant to State
93 Law Requirements.

94 The net decommissioning cost (in 2018 US dollars) is estimated to be approximately \$6.6
95 million dollars assuming salvage and no resale of Project components. This cost includes a
96 partial offset from the salvage value of the towers, turbine components and electrical equipment.
97 Triple H proposes to cover the cost of the decommissioning through a parent guarantee or letter
98 of credit.

99 In North America, Engie manages a range of energy business in the United States and
100 Canada including retail energy sales and energy services to commercial industrial and residential
101 customers, natural gas and liquefied natural gas distribution and sales, and electrical generation.
102 The North America renewable portfolio of ENGIE consists of wind, solar, and biomass/bio gas
103 assets. Engie North America is a subsidiary of the Engie Group.

104 The Engie Group is a whole is a multinational company that is invested in various forms
105 of energy development, operation and various retail in over 70 countries worldwide. The Engie
106 Group employs approximately 240,000 employees worldwide and completely \$73 billion dollars
107 in sales in 2018. Given the size and scale of Engie, utilizing a parent guarantee or letter of credit
108 would be sufficient to guarantee decommissioning costs over the life of the Triple H Wind
109 Project.

110 **Q. Do your agreements with landowners speak to decommissioning? If so, what do they**
111 **say?**

112 A. Our agreements detail at 17.3 the creation of a Restoration Fund for decommissioning.
113 Unless the Commission orders differently, TripleH is contractually committed to the creation of
114 that fund. The language is attached hereto as Exhibit A.

115 **Q. Why was the Project location selected and what other alternative areas were**
116 **considered?**

117 A. Generally, a wind project location, or early prospect, is identified through a combination
118 of identifying a high wind resource area based on publicly available data and access to
119 transmission. From there, the land use considerations are factored in such as the environmental
120 combability of a given area, current land uses, and land owner support. All of these factors were
121 determined to be favorable based on the Triple H area and thus the Project was pursued for
122 further development.

123 **Did you work with the County Agencies in coordinate with the CUP process and what**
124 **efforts were made to address questions or concerns?**

125 A. Yes. Hyde County had an existing wind energy development ordinance within the
126 existing zoning ordinance that was a bit dated. County officials elected to update this ordinance
127 in order to improve it and started the process in early 2018. I worked closely with the County to
128 provide information and participate through the public process while the zoning ordinance
129 update was being prepared. The County approved their zoning ordinance in October 2018.
130 While Engie's position was the some of the standard that were eventually adopted were quite a
131 bit more conservative than were necessary in terms of setbacks, we were able to work with them

132 and design the project so that it was consistent with the requirements in the zoning ordinance.

133 We have many points of contact with the public to convey informatin about the Project,
134 in particular during the public meetings to update the Hyde County Zoning Ordinance. In
135 addition, there were two open house meetings regarding the Triple H Wind Project. The first
136 occurred in the spring of 2018 while Hyde County was still updating their Zoning Ordinance.
137 The second open house meeting occurred in December following the submittal of the CUP
138 applications.

139 **Q. What is the proposed time schedule for the Project and what are the implications of**
140 **a delay?**

141 A. The Project is scheduled to be operational by late fall of 2020. We are hopeful to receive
142 favorable determinations on the SDPUC facility permits by August of 2019. Current activities
143 through the spring and summer of 2019 will include completion of an ALTA survey,
144 supplemental environmental studies (as needed), geotechnical studies, and final engineering and
145 design. Our target is to break ground in the fall of 2019 to complete civil work prior to winter
146 setting in. The project area will be de-mobilized for the winter period through the spring of
147 2020. After the frost law limitations are removed, the site will be remobilized in roughly April
148 to May 2020. Turbine deliveries are targeted in commence based on the delivery scheduled that
149 has been negotiated with GE in June of 2020. Turbine deliveries will occur with lifting and
150 installation through the summer of 2020. The project substation would be energized by
151 September to October 2020, with a commercial operation date toward late fall 2020.

152 A delay in the Project would result in several consequences. First, the project has
153 existing PPAs that have been executed that have contractual commercial operation date

154 requirements in them. If we are not able to meet these deadlines, liquated damages would be
155 incurred. Second, there is a substantial demand on turbines in 2020. A delay in the project
156 would result in the loss of the turbine delivery slot that has been locked in with GE resulting in
157 significant uncertainty as to when additional turbine supply windows could be locked in. Third,
158 similar to turbine availability, the availability of construction firms with significant wind turbine
159 construction experience is limited in 2020. We have selected to use Wanzek to construct the
160 Triple H Wind Project. A delay in the project may result in the inability of Wanzek to support
161 the construction of the Project due to other contractual obligations that they have with other
162 projects throughout the country.

163 **Q. Are you proposing to install an aircraft detection lighting system (ADLS)?**

164 A. Not at this time. Engie staff has been involved and investigated the use of ADLS systems
165 for several years. Up until recently, there had been four suppliers on the market that provided
166 some form of ADLS system. We had been engaged with Laufer Wind on their radar lighting
167 system as early as 2016. It is our understanding that Laufer is no longer in business. Vestas is a
168 turbine manufacturer and offers another system, but it's offered as an option on the turbines they
169 supply. We are proposing to using a turbine model from GE, one of their competitors. It is our
170 understanding that Vestas will not allow its system to be used in conjunction with a competitor's
171 turbine. Detect, Inc offers another system, but we have not evaluated this in great detail, nor are
172 we aware if this system has been approved for use by the FAA. Technostrobe offers a different
173 system in that it dims the lights when they are not needed. The technology is compelling,
174 however is presently being approved for use by the FAA.

175 These systems add considerable cost to wind projects. We recognize that there are
176 circumstances where the systems could be used to mitigate the required lighting on wind

177 turbines. However, we are of the opinion that the Triple H Wind Project is not one of those for a
178 couple reasons. First, Hyde County has approximately 1,400 people that live in the County with
179 about half of those that live in Highmore, which is well over 3 miles away from the Project.
180 Second, the Project is fairly rural with few residents that live in close proximity to the turbines.
181 Third, the County has setback standards from non-participating landowners that are set at ½
182 miles. There are 12 non-participating homes that are located between ½ mile to 4,000 feet from
183 the closest turbine. Of those, several are actually participating property owners, it's just the
184 particular location is not under easement. We believe the combination of the rural nature of the
185 County combined with the County's conservative siting practices adequately mitigate the
186 impacts caused by required FAA lighting, such that an ADLS is not warranted.

187 **Q. Did you commission a poll to determine public opinion on the project and if so, what**
188 **were the results?**

189 A. The results showed a clear public opinion in favor of the project. The poll questions and
190 results are attached to my testimony as Exhibit B.

191 Dated this _____ day of February, 2019.

192 _____

193 Casey Willis