

**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**

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**PRE-FILED DIRECT TESTIMONY OF _____, WANZEK CONSTRUCTION,
ON BEHALF OF ENGIE NORTH AMERICA, INC.**

February __, 2019

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

2 A. Jason Hellerud, Wanzek Construction Inc. 4850 32nd Ave. S. Fargo, ND 58104

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

4 A. Bachelors degree in Construction MGMT from MSUM

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

6 A. Have been a Construction Manager since 2001. Duties have ranged from Field Engineer to
7 Estimating/Project Management.

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

9 A. Yes, my resume is attached.

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

12 A. No, I have not.

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

14 A. My testimony will support the portions of the application which discuss and illustrate the
15 construction and potential decommissioning of the project. Those sections are 4.2, 4.4 through
16 4.12, 17, and 20.2

17 **Q. What type of foundation will be used?**

18 A. Triple H plans to use a spread foundation design. Foundations for the towers will be
19 approximately 2,700 square feet, with a depth of up to 10 feet. Except for approximately 12
20 inches that will remain aboveground to allow the tower to be appropriately bolted to the
21 foundation, the tower foundation will be underground. A specific foundation design will be
22 chosen based on soil borings conducted at each turbine location.

23 The excavated area for the turbine foundations will typically be approximately 75 feet in

24 diameter (37.5-foot radius, or approximately 9.3 acres for 92 turbines). During construction, a
25 larger area up to 150-foot radius (up to 150 acres for 92 turbines) may be used to lay down the
26 components of the turbines and assemble the rotors and maneuver cranes during turbine
27 assembly.

28 **Q. How will construction impact the roads in the project area?**

29 A. Where practicable, existing public roads, private roads and field paths will be utilized to
30 access Project components. The existing roads may require improvements before, during or
31 following construction. Where necessary, new access roads will be constructed between existing
32 roadways and Project components. The new and improved access roads will be all-weather,
33 gravel surfaced and generally up to approximately 16 feet in width. During construction, some of
34 the access roads will be widened to accommodate movement of the turbine erection crane, with
35 temporary widths of up to 40 feet.

36 Separate access may be required for the cranes used to erect the wind turbines. In such
37 cases, temporary crane paths will be constructed between turbine locations. Following
38 completion of construction, the temporary crane paths will be removed and the area will be
39 restored pursuant to the contractual easement obligations. The final access road design will be
40 dependent on geotechnical information obtained during the engineering phase.

41 Large construction cranes may spend as little as one day at each turbine site before
42 moving on to the next. Cranes are sometimes moved cross-country rather than by using the
43 developed access roads. There are a number of reasons for such cross-country movement
44 including efficiency and economics. Taking a more direct route saves time. Breaking down the
45 crane is time-consuming. This type of cross-country walking enables the crane to be moved
46 without complete de-rigging and disassembly. We avoid walking cranes on county roads or state

47 highways as that could impede traffic and damage roads. Many crane walk routes are designed
48 around topography. Finally, cranes cannot cross a property that is not under easement. Where
49 cranes are required to travel cross-country, workers will lay down some form of cribbing,
50 bedding or mats if needed to support the weight of the crane. If utilized he cribbing or mats will
51 be removed immediately following passage of the crane, to be re-used elsewhere.

52 **Q. Will the project utilize a laydown area? If so, what can you tell us about that?**

53 A. Triple H will grade a temporary laydown/staging area of up to approximately 13 acres
54 within the Project Area on land under lease (Figure 2a in Appendix A). Two potential locations
55 for the laydown/staging area have been identified. The laydown/staging area will provide
56 parking for construction personnel, staging area for large equipment deliveries and potentially
57 maintain an on-site temporary concrete batch plant during construction. If a temporary batch
58 plant is determined to be required for the Project, to prepare concrete for foundations onsite, it
59 will be strategically placed to avoid cultural resources and will temporarily impact up to 4 acres
60 of the 13-acre laydown/staging area.

61 The laydown/staging area will also be used to conduct maintenance on construction
62 equipment and vehicles and to store fuel. On-site fuel storage will have secondary containment
63 and will be inspected regularly, with containment being remediated promptly in accordance with
64 the Project's Spill Prevention, Control and Countermeasures (SPCC) Plan. Fuel handling
65 activities and spill remediation will also adhere to the procedures outlined in the Project's SPCC
66 Plan.

67 **Q. Will you construct an operations and maintenance facility?**

68 A. Yes. The O&M facility will be located within the Project Area, in a location with proper
69 transportation, communications facilities and ease of access to Project facilities (Figure 2a in

70 Appendix A). Construction of the up to 5-acre O&M facility will require a building permit from
71 Hyde County. O&M buildings are typically approximately 5,000 square feet and house the
72 equipment to operate and maintain the Project. Ambient conditions within the O&M facility will
73 need to be maintained to meet equipment operating requirements and/or to support the presence
74 of maintenance personnel. Heating of all occupied structures will be provided by propane stored
75 on site. Although the electric power demands of the O&M building and the operating equipment
76 will be supplied from the grid, emergency power generation will also be available on-site via a
77 diesel engine/generator set.

78 **Q. What will the project use to connect the towers electrically?**

79 A. The proposed collector system layout based on the proposed turbine configuration is
80 shown on Figure 2a (Appendix A). From the step-up transformers, power will run through an
81 underground system of collection cables, collector buses and feeder breakers, referred to as a
82 collector system, that connects to the Project collection substation. Up to 55 miles of
83 underground circuits will be installed by trenching, plowing or, where required, directionally
84 boring the cables underground to avoid sensitive environmental conditions or meet other
85 requirements. Generally, the electrical collector lines will be buried with marking tape to meet
86 the appropriate national electrical code. Triple H will register the appropriate underground
87 facilities with the South Dakota One-Call system.

88 **Q. Will communications systems connect the towers? If so, tell us about them?**

89 A. When installing the collector system, Triple H will also install fiber optic communication
90 systems connecting each of the Project's wind turbines to the Project collection substation and
91 provide for communication among the wind turbines, collection substation, O&M facility and
92 electrical grid as part of SCADA (see Section 4.2.1.1). If underground, the electrical and fiber

93 optic cables will be placed in the same trench wherever possible and will include occasional
94 aboveground junction boxes.

95 **Q. What type of substation will be used by the project?**

96 A. The collection substation will be located generally in the center of the Project Area and
97 will consist of two substation transformers, circuit breakers, switching devices, auxiliary
98 equipment, a control enclosure containing equipment for proper control, protection, monitoring
99 and communications and associated equipment and facilities. The principal function of the
100 substation is to increase the voltage from the 34.5 kV at the collector system to the voltage of the
101 345 kV transmission line, which will transport the electricity of the entire Project to the grid via
102 the interconnection switching station. The collection substation will be located within a fenced
103 area. The fence will be designed in accordance with industry standards to provide safety and
104 security.

105 Up to 5 acres of land will be purchased to facilitate construction and operation of the
106 collection substation. Two potential locations under consideration for the Project collector
107 substation are identified in Figure 2a (Appendix A). As discussed in Section 4.2, Triple H
108 requests that the permit allow Project facilities, including the collection substation, to be
109 modified as needed provided that the new locations are on land leased for the Project, cultural
110 resource impacts are avoided and conditions specified in the Energy Facility Permit.

111 **Q. What land requirements have you identified?**

112 A. Temporary construction and long-term operational land requirements are identified
113 below. Table 6-1 presents impact calculations.

114 **Q. Please briefly describe the construction process.**

115 A. Triple H plans to commence construction within 30 days of receiving all required

116 federal, state and local permits and approvals. Construction is expected to require a period of
117 between 12 to 16 months to complete. Triple H anticipates that the majority of civil construction
118 will begin in the fall of 2019 and be completed prior to winter. The construction crews will then
119 demobilize for the winter period through the spring thaw (frost law period). Construction crews
120 will then mobilize back to the Project in late spring 2020, with turbine deliveries occurring
121 through the summer of 2020.

122 **Q. Have you identified impacts to the surrounding residents and communities from**
123 **construction? If so, please discuss them.**

124 A. During the construction phase, temporary impacts are anticipated on some public roads
125 in the vicinity of the Project Area, however local traffic will continue to have safe access though
126 the area. Roads will be affected by the transportation of equipment to and from the Project.
127 Construction traffic will use the existing county and state roadway system to access the Project
128 and deliver construction materials and personnel. During the construction phase, several types of
129 light, medium and heavy-duty construction vehicles will travel to and from the Project Area, as
130 well as private vehicles used by construction personnel. Triple H estimates that there will be up
131 to approximately 45 large truck trips per day, per foundation and up to 100 small-vehicle
132 (pickups and automobiles) trips per day in the area during peak construction periods. Some roads
133 may also be temporarily expanded along specific routes as necessary to facilitate the movement
134 of equipment.

135 Construction activities will increase the amount of traffic using local roadways, but
136 such use is not anticipated to result in adverse traffic impacts. Project personnel and contractors
137 will be instructed and required to adhere to speed limits commensurate with road types, traffic
138 volumes, vehicle types and site-specific conditions to ensure safe and efficient traffic flow.

139 **Q. How many workers will you need? Where will they live during construction?**

140 A. The Project is expected to employ approximately 200 temporary construction workers
141 during an estimated 8 month peak construction period to support Project construction. It is likely
142 that general skilled labor is available in the surrounding counties or the state to serve the basic
143 infrastructure and site development needs of the Project. Specialized labor will be required for
144 certain components of Project construction. It is likely that this labor will be imported from other
145 areas of the state or from other states, as the relatively short duration of construction makes
146 special training of local or regional labor impracticable.

147 The estimated number of construction jobs by classification and annual employment
148 expenditures during construction are included in Table 17-1; however, the exact number of jobs
149 during the peak of construction may be higher.

150 **Q. How will you coordinate activities with local emergency response?**

151 A. Triple H and its construction team will coordinate with first responders, including but not
152 limited to air ambulance, local sheriff's office(s) and local fire services to develop an emergency
153 management plan during construction and operation of the Project. Triple H will also be in
154 contact with local first responders to offer information about the Project and to answer any
155 questions response teams may have regarding Project plans and details.

156 Dated this _____ day of February, 2019.

157  _____

158 Project Mgr., Wanzek Construction